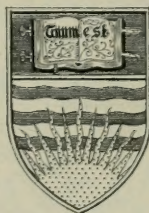


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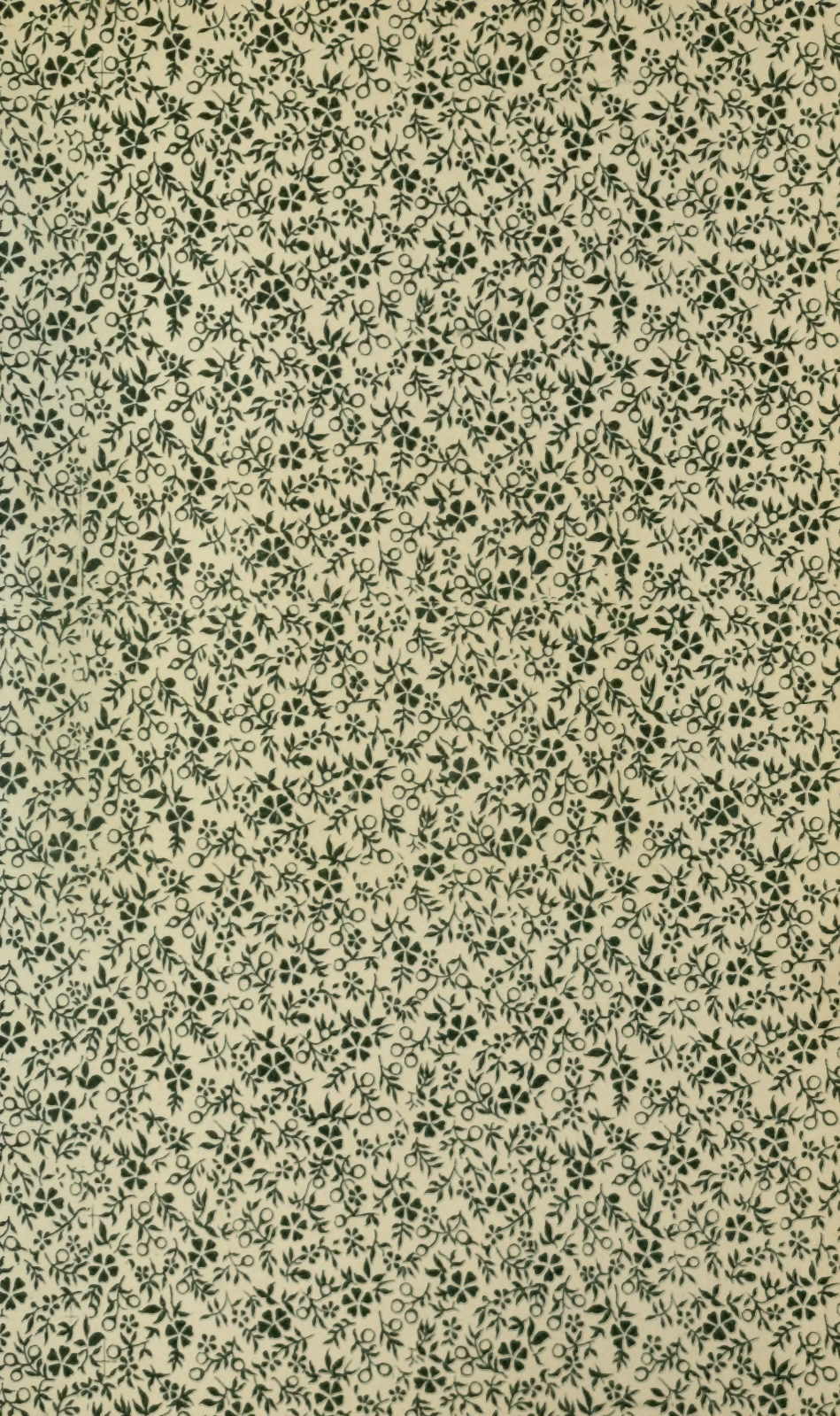
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Individual Home Study Course in Higher Accounting

Complete Text of Lessons

Nos. I to XII

CONDUCTED BY
The International Accountants' Society, Incorporated

Examiners:
E. H. BEACH W. W. THORNE H. L. HALL

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Addenda and Errata

LESSON 1.

Exercise 9—

Substitute the following: Describe method of keeping track of Bank account and reconciliation with Bank Pass Book.

LESSON 2.

Addenda to Paragraph 37—

The private ledger will then usually contain Capital, Trading and Profit and Loss accounts, Controlling accounts, and such other accounts as it may be deemed desirable to protect from the observation of employees.

Form of Working Balance Sheet, Par. 58—

Amount added to Newspaper Expense in Trial Balance Debit Column should be \$90.00.

Addenda to last paragraph: Only the amount remaining—\$1,100.00 (after deduction of \$1,100.00 from \$2,200.00) should appear in the Trial Balance Debit column, the amount of deduction having been charged off on some previous occasion.

For "General Expense is reduced \$280" read "General Expense is reduced \$270."

Exercise 8—

The reference to paragraphs should be (65-66) instead of (55-56).

Exercise 9—

Wages accrued, \$500, does not show on the books and should not have been included in the list of balances.

LESSON 3.

Paragraph 76—

In note at foot of page for "page 9" read "line 9."

Exercise 6—

This exercise is somewhat too involved for this stage of the Course. The student may, therefore, substitute the following:

Give fully your understanding of—

- (a) Revenue.
- (b) Receipts. Show wherein they differ.

LESSON 5.

Paragraph 114—Tanning Co. Report—

The amounts scheduled as inventories of ledger balances are arrived at as follows:

The total sales as stated were \$75,000, and the inventory \$25,000. \$25,000 has also been transferred from the Manufacturing account to the Manufactured Stock account, which would leave the ledger balance of that account \$50,000, as stated.

Paragraph 125—

The correction referred to has been made in revised editions of the A. B. and A. E.

Exercise 1—

For "from a sketch" read "submit a sketch."

The heading "Corporation Entries" is the commencement of Exercise 3.

Exercise 4—

For "Installment No. 1, Exercise 13" read "Installment No. 1, Exercise 12."

LESSON 7.

Exercise 2—

It is not necessary for the student to confine the answer to the kind of manufacturing business described in Exercise 1. He can submit answers based on either Class 1 or Class 2. (See paragraphs 158 and 159.)

Paragraph 176 (a)—Addenda: The totals of these cost summaries are posted at the end of the month to the credit of material, labor and factory expense accounts, and debited to Finished Goods account.

LESSON 8.

Exercise 1—

In answering this Exercise the student should refer to Paragraph 189 of the lesson.

LESSON 9.

Exercise 1—

Change paragraph 3 to read as follows:

Outline method of changing books from single to double entry and from partnership to corporation. Devise simple and efficient shop records for a business of the size indicated, and submit sketches of forms recommended for use.

Exercise 2—

The percentage of profit should be computed on total cost plus administrative and selling expense.

LESSON 11.

Exercise 5—

Finished wheels on hand should be stated as of Jan. 1, 1903, instead of 1904.

The amount of labor productive should be \$82,500 instead of \$62,500.

LESSON 12.

Exercise 1—

For "What would be the nature of your audit" read "What would be the general program of your audit."

Exercise 2 (a)—

See lesson 5, paragraph 128.

A WORD TO THE STUDENT

There Is No Royal Road to Learning

Knowledge is gained in but one way; by study. You must work for it just as you must work for everything which is worth having. The more faithfully you devote yourself to these lessons the greater will be your success and the shorter the time you must wait for it.

Work systematically. If possible you should devote a certain amount of time each day to your studies. Let study become a habit.

Don't think, when you have read the lesson booklet we send you, that you have done your part. Look up the references given. Read them carefully and understandingly. Ask questions of us about any point you do not understand. Then you are ready to answer the questions.

In answering the questions you will naturally get your ideas from the text books, but do not copy the answers you find there.

Clothe the idea in your own words. When forms are called for, build them yourself. Select your illustrations from some line of trade you are familiar with. This makes you practical instead of theoretical.

We furnish no forms for you to fill out. We do not wish you to learn how to fill out forms. Any one can do that. What we wish to teach you is principles. Not how to do it, but why to do it. We teach you to make forms—not to fill them out.

In Preparing Your Exercises

Use white paper.

Use light weight paper. It saves postage.

Use common "journal ruled" paper for entries.

Use unruled paper for forms.

Use pen and ink. Not lead pencil.

Use sufficient postage to cover the cost of mailing your work.

Ask us to explain before sending in your answers—when you do not understand.

We will send you the "Standard Answers" without your working out the exercises, but, **remember**, when we do so, you cannot receive a mark on that lesson, and you are not eligible for a certificate.

Place your name and address on **each** sheet you send in and on every form. **This is very important.**

Now, let us work together for your better knowledge and profit.

INSTALLMENT I

Theory of Accounts and Advanced Book-keeping

Theory of Accounts and Advanced Book-Keeping

Text Books referred to:

American Business and Accounting Encyclopædia—(A. B. & A. E.)

Thorne's Twentieth Century Book-keeping and Business Practice

—(Th. M.)

The attention devoted to this subject will be brief, as the directions for study of the text books furnished should be sufficient to guide the beginner to a thorough comprehension of the primary principles of book-keeping and their application, while those possessing no practical experience should first take our Preliminary Course in Book-keeping and Accounting.

It should be observed here that the capability to keep a set of books in balance is simply the bottom rung of the ladder of accounting, although it is commonly conceived to be the Alpha and Omega of the science. The man who aims to obtain and hold good positions in the business world must know how to adapt himself to new conditions and how to meet them. He must be ready not only to do things, but to do them in the best possible manner. The business man of to-day demands accurate and comprehensive information in regard to his business, and looks to the book-keeper for it.

(1) INTERCHANGEABLE TRANSACTIONS.

The text books calls attention to "interchangeable transactions" in which values are shifted by means of debits and credits to accounts without actually affecting such values. The variety of such entries is unlimited and they constitute some of the principal difficulties with which an inexperienced book-keeper has to contend.

For present purposes we will define interchangeable transactions as those relating to a transfer from one department of a business to another which does not affect value. The exchange of merchandise for cash affects value, for the reason that it includes a profit.

(2) DEBIT.—See Th. M., par. 55, 90.

Debits may be divided into four classes:

(a) Accounts representing values on hand, or purchased, such as cash, stock-in-trade, real estate, machinery—the property possessed by the merchant prepared to do business.

(b) Accounts representing values parted with and also recording the transfer of values, such as customers' accounts, investment accounts, etc.

(c) Accounts representing losses, such as general expense, postage, cash discount, etc.

(d) Accounts carrying deductions from credits (negatives), such as allowances for returns, depreciations, adjusting entries.

(3) CREDIT.—See Th. M., par. 82.

The classification of credits given in the A. B. & A. E. consists of the following:

(a) PERSONAL OR IMPERSONAL CREDITS.—On account of goods purchased, cash received, goods returned, etc.

b) IMPERSONAL CREDITS.—Representing reduction of outlay or deduction from debits.

(c) STATISTICAL CREDITS.—Representing a number of debits to personal accounts.

(d) PROFIT AND LOSS CREDITS.—Being the balances of accounts transferred to Profit and Loss.

As a knowledge of "Elementary Book-keeping" may be described as the ability to keep a set of books in balance, we will now briefly mention the books usually to be found in an ordinary office, or which are the main factors in recording business transactions.

(4) SALES BOOK.—A record of orders filled. The information recorded is obtained from various sources. Sometimes an order book is kept into which are entered all orders received verbally or in writing. In other cases it is customary to enter the orders filled into the sales book from salesmen's tickets, or direct from the letters containing the orders.

Separate ORDER BOOKS are found useful for the purpose of recording order numbers so that it can be seen no order is overlooked, and for the purpose of distributing orders taken by each salesman for statistical purposes, and to show commissions earned. (Th. M., par. 167.)

By ruling the sales book with two columns, returns and allowances can be conveniently recorded in the second column, so that the sales book will always show net sales as well as gross.

See Th. M., par. 66, 142, 220, 497.

(6) When it is desired to obtain a separate record of any particular kind of article sold, provide a separate column in the sales book in which to enter the sales of that article.

(7) The use of ORDER BLANKS instead of sales books is largely prevalent, being found very convenient and labor-saving in many businesses.

The order blank is sometimes filled out by salesmen where prices can be made at time of entering order, posting being made direct from order blank to customers' accounts in the ledger, and the order blanks being then filed away as the sales record.

Order blanks are sometimes made in duplicate, the original constituting the bill to the customer and the duplicate being the sales record. Where, however, distribution has to be made to other departments in order to obtain amount of sales belonging to each, it is not usually convenient to

provide columns for distribution on order blanks, especially where the necessary columns are numerous. In such cases the number, name and amount are usually entered in a sales book with distribution columns provided.

Where the principal commodities sold may be divided into two or three departments, each customer frequently ordering in all three at the same time, the distribution is frequently made on the order blank as shown below and a recapitulation made in order to obtain the totals. Th. M., par. 166, 465.)

Order Blank

○	Terms	Nevada Paint & Varnish Co. Reno, Nevada. Sold to <u>W. P. Fuller Co.</u> Salesman <u>Jones</u> <u>Stockton, Cal.</u>					Sheet No.	Ledger Folio	
	Rating							Customers Ord. No.	
	Limit							Our Order No.	
	Date Recd.							Date to Ship	
	Date Quiled							Shipped by	
	Date Shipped							Via N.C. & O.	
Binder No. <u>1</u>									
○	Shippers Check	Quantities	Size	Description	Price	Total	Paint	Varnish	

Sales returns are frequently entered on credit slips, posting being made direct from them to the ledger and a recapitulation of the amounts made so that totals may be debited to sales account at the end of the month.

The same method may be applied to purchase returns.

(8) UNFILED ORDERS are usually kept in a "waiting" file.

A vertical filing system is found very convenient, consisting of folders with future dates (as far ahead as necessary) printed or written near top edge. Into these folders orders are placed when received. Each day the file under that date is referred to and orders removed and cared for in the regular way.

(9) PURCHASE BOOK.—A record of goods purchased. The regular two column journal is frequently used for this purpose, but the copying of items from invoices to journal is now almost universally recognized as a gross waste of time, so that the entries should consist simply of name, date of invoice, terms and amount.

When separate records of the purchase of particular classes of goods are required a special purchase book is used, ruled with separate columns for each class of article of which special records are desired.

The purchase book columns will therefore show cost of goods purchased; the sales book columns will show amount realized from cost of goods purchased.

For information as to columnar sales and purchase records see Th. M., par. 10, 151, 194, 196, 323, 500. Attention will be given this subject later on.

The purchase book can be ruled to record returns and allowances as described under the heading of sales book.

An excellent method of keeping track of purchases is given in Th. M., par. 196.

(10) At the end of each month the total of the sales book debits is credited to a SALES ACCOUNT in the ledger. The total of sales book credits (returns, etc.) is debited to Sales Account.

(11) The total of the purchase book credits is debited to a PURCHASE ACCOUNT in the ledger, and the total of purchase book debits (returns, etc.) credited to Purchase Account.

These two accounts are called “representative accounts” because they represent on the ledger the transactions recorded in the sales and purchase books.

(12) CASH BOOK.—The record of cash receipts and expenditures, the receipts (credits) being entered on the left hand pages, and the expenditures (debits) on the right hand pages. As the reason for this arrangement is by no means clear to many we will explain it as follows:

A receipt is a credit to the person from whom the amount is received, but a debit to cash account. An expenditure is a debit to the account on which expended but a credit to cash account. It used to be the custom to carry all cash transactions through the ordinary journal. By this method the amount received was entered on the credit (right-hand) side, and cash was debited on the left-hand side. This constant debiting and crediting of cash for receipts and expenditures involved a great deal of labor and the separate cash book was invented as a labor-saving device.

The cash book is in reality a book in which the ledger account with cash is kept instead of in the ledger, while at the same time it combines the journal feature as a record from which to post to other ledger accounts.

It is, therefore, a combination ledger account and journal. The ledger account is debited with all cash receipts and credited with all cash expenditures, and the balance of the account is transferred at the end of the month (for convenience) to the cash account opened in the ledger.

CASH BOOK.

EXAMPLE:—

August—		Lumber	\$180 00
Jones	\$ 50 00	Sand	45 00
Smith	200 00	Sundries	10 00
Brown	100 00	Balance on hand	115 00
	<hr/>		<hr/>
	\$350 00		\$350 00
September—			
Bal. forward	115 00		

LEDGER.
CASH ACCOUNT.

Dr.
Sept. 1. Fol. 125\$115 00

To save labor in posting, separate columns are provided in the cash book for accounts to which there may be a large number of entries each month.

The totals of these columns are posted at the close of the month and not the items.

The columnar principle holds good in all subsidiary or auxiliary books of account containing numerous items belonging to the same classification or department, such as General Expense, Freight, Discount, Labor.

For examples of cash books see Th. M., par. 5, 49, 50, 66, 142, etc.

(13) Where ledgers are SECTIONALIZED, as is usually the case in a business of any size, separate columns are provided in cash book and journal for each ledger, so that each ledger may be proved separately. For full particulars in regard to sectionalization see Th. M., par. 76, 142, 144, 222, etc.

(14) The treatment of deductions from customers' remittances for cash discount, allowances, etc., has occasioned much controversy. Inasmuch as we think the account in the ledger should show full particulars of settlements we favor entering net remittance in Cash Received column, and amount of deduction in a separate deduction column, posting both items to the ledger. The total of the deduction column is debited to proper ledger account at the end of the month. Some book-keepers carry separate columns for different classes of deductions, such as discount, freight, allowances.

Another method is to enter full amount of account settled in Cash Received column, and amount or deduction in deduction column, posting only the former to the customers' ledger account. This does not make a correct showing in the ledger, when reference is made for the purpose of deciding or extending credit, and the total of the deduction column must be deducted from the cash received column whenever cash is balanced.

(15) BANK ACCOUNT.—The bank account should be kept on the same principle as the cash account, *i. e.*, deposits and withdrawals should not be recorded in the ledger, but the amount of balance on hand should be transferred to the debit of bank account at the end of each month.

See Th. M., par. 27, 52, 60, 203, 375, 376.

(16) JOURNAL.—Eliminating records of sales, purchases, returns, discounts and allowances, we may describe this book as a record of cross, adjusting and closing entries, and particularly as a record of those "inter-changeable transactions" of a business previously mentioned.

A cross-entry is one made to correct an error.

An adjusting entry is one made to adjust differences by allowance, etc., or to transfer from one account to another for statistical purposes.

A closing entry is one transferring the balance of one account so that it is absorbed in another in order to exhibit net results.

See Th. M., par. 12, 63, 84, 104, 169, 208.

(17) LEDGER.—A book of account containing summaries of all transactions with customers and creditors and of losses and gains in connection therewith. The various styles of modern ledgers will be described later.

In a small business one ledger usually contains customers, creditors, and impersonal accounts.

(18) IMPERSONAL ACCOUNTS.

REAL ACCOUNTS.

REPRESENTATIVE ACCOUNTS.

REVENUE ACCOUNTS.

Impersonal account is a title covering all accounts except those with persons.

Real, representative and revenue accounts are subdivisions of impersonal accounts.

These three classes of accounts should be kept in separate sections of the ledger and sectionalized on the trial balance.

(19) A real account is an asset. Example—Real estate.

(20) A representative account is one representing a number of personal debits or credits. Examples—Sales account, Purchase account.

(21) A revenue, or nominal, account is one relating to income and expenditures, the balances of which are transferred periodically to Profit & Loss. Examples—Interest receivable, general expense. See Th. M., par. 36, 76, 122, 125, 144, 158, 159, 198, 209, 219, 222.

(22) INVENTORY.—As separate accounts are kept with sales and purchases it is the modern custom to keep a separate account with Inventory, making the following journal entry:

Dr.		Cr.	
Inventory	\$5,000 00	Profit and Loss.....	\$5,000 00

The Inventory will then stand on the books as a resource until a new inventory is taken, the old inventory being ruled off just as the old balance of cash account is treated.

In preparing TRADING ACCOUNTS the old inventory is debited and the new inventory credited, the surplus of the new inventory over the old inventory being a component of gross profit transferred to Profit & Loss.

For examples see Th. M., par. 26, 153, 241, and Model Sets.

(23) TRIAL BALANCE.—A summary of ledger balances, showing the agreement of debits and credits.

See Th. M., par. 242 and Model Sets.

(24) PROFIT AND LOSS ACCOUNT.—An account into which are closed the balances of all ledger accounts showing gains and losses, and which, therefore, exhibits net gain or loss for the period covered by the account.

See Th. M., par. 26, 158 and Model Sets.

(25) SINGLE ENTRY.—See Th. M., par. 226, 430.

DOUBLE ENTRY.—See Th. M., par. 226, 430.

(26) HOW TO CHANGE BOOKS FROM SINGLE TO DOUBLE ENTRY.

The American Manufacturing Co. have kept their books by single entry but want to change. They have records of purchases and sales, but no accounts to represent them in the ledger. They have unclosed expense accounts in the ledger amounting to \$18,375.00. According to their records they have in two years purchased goods to the amount of (net) \$84,796.50, and made sales to the amount of (net) \$120,716.50. No distribution of profits has yet been made.

In this case the simplest plan is to open a merchandise account, charge it with the purchases, and credit it with the sales. Make a list of accounts and bills receivable and of accounts and bills payable, and obtain the totals. A statement may then be prepared as follows:

(27) STATEMENT OF AFFAIRS OF THE AMERICAN MFG. CO., JAN. 1, 1901.

	Dr.	Cr.
Cash	\$ 1,750 00	
Accounts Receivable	69,809 21	
Bills Receivable	29,085 79	
Machinery and Plant	11,400 00	
Real Estate	26,400 00	
Merchandise	84,796 50	\$120,716 50
Patents	20,500 00	
Revenue Expenditure Accounts	18,375 00	
(total of various)		
Accounts Payable		21,400 00
Bills Payable		20,000 00
A. Walker, Investment Account.....		40,000 00
E. Walker, Investment Account.....		30,000 00
W. Burroughs, Investment Account.....		20,000 00
S. Rothwell, Investment Account.....		10,000 00
	<hr/>	<hr/>
	\$262,116 50	\$262,116 50

(28) Inventory being taken at \$32,100.00, we first close the revenue accounts into a Profit and Loss Account:

Dr.		Cr.	
Various Expense Accts.	\$18,375 00	Inventory	\$ 32,100 00
Merchandise	84,796 50	Merchandise	120,716 50
Balance, or Surplus.....	49,645 00		
	<hr/>		<hr/>
	\$152,816 50		\$152,816 50

And are now in a position to make the following Double-entry Balance Sheet, with which the books must be made to conform:

(29) BALANCE SHEET.

Assets.		Liabilities.	
\$ 1,750 00	Cash.		
69,809 21	Accounts Receivable.		
29,085 79	Bills Receivable.		
11,400 00	Machinery and Plant.		
26,400 00	Real Estate.		
32,100 00	Inventory.		
20,500 00	Patents.		
	<hr/>		
	Accounts Payable	\$ 21,400 00	
	Bills Payable	20,000 00	
	A. Walker, Investment Account....	59,858 00	
	E. Walker, Investment Account....	44,893 50	
	W. Burroughs, Investment Acct...	29,929 00	
	S. Rothwell, Investment Acct.....	14,964 50	
		<hr/>	
<hr/>		\$191,045 00	
\$191,045 00 .			

EXERCISES.

1. Specify examples of each of the four classes of debits other than those given herein. Par. 2.
2. Specify examples of each of the four classes of credits other than those mentioned herein. Par. 3.
3. Give two examples of "interchangeable transactions" on books of account. See definition par. 1.
4. Draw sketch of sales book arranged for record of sales and returns, divided into two departments.
5. Explain what is meant by a "waiting file" and how used.
6. Draw suitable form of purchase book including record of terms and maturities.
7. Explain the use of separate Sales and Purchase accounts in the ledger.
8. Draw suitable form of cash book, providing for sectionalization of ledgers, and special columns for accounts to which there are likely to be numerous postings, and specifying accounts for which the special columns are intended. Also illustrate treatment of cash discount.
9. Describe method of keeping track of Bank account.
10. Give samples of cross, adjusting and closing entries in the journal.
11. Give specimens of (a) representative, (b) real and (c) revenue accounts.
12. Illustrate briefly: Sales account, Purchase account, Inventory account, and the transfer to Trading and Profit & Loss accounts.

NOTE.—Marks will be awarded according to the merit of the answers, and these marks will form the basis of award of Certificate of Membership in The International Accountants' Society, Incorporated, at end of course.

Marks possible—100. Average required—75.

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INSTALLMENT II

Theory of Accounts and Advanced Book-keeping

Theory of Accounts and Advanced Book-keeping

Text Books referred to:

American Business and Accounting Encyclopædia—(A. B. & A. E.)

Thorne's Twentieth Century Book-Keeping and Business Practice. (Th. M.)

In this installment we will first discuss the best methods of arranging and proving ledger work, as this is one of the first questions by which the book-keeper is confronted.

(30) Sectionalization is another name for departmentalization. Where accounts are very numerous it is very advantageous to divide them into convenient sections, or departments, and arrange to check the work on each section separately.

The first distinction to be drawn is in regard to (a) customers' accounts, (b) creditors' accounts, and (c) accounts which do not come under either of these classifications. Quite a literature of nomenclature has been devoted to the latter class, which are referred to variously as

Real

Representative

Nominal

General

Impersonal

Private

(31) IMPERSONAL ACCOUNT.—See Th. M., par. 125.

(32) NOMINAL ACCOUNT.—See Th. M., par. 159.

(33) REAL ACCOUNT.—See Th. M., par. 198.

(34) REPRESENTATIVE ACCOUNT.—See Th. M., par. 209.

(35) GENERAL ACCOUNT.—An account kept in the "General" ledger.

(36) PRIVATE ACCOUNT.—An account kept in the "Private" ledger.

In sectionalizing accounts it is usual to provide a separate ledger for each section, but in small businesses the same end can be attained by devoting a certain number of pages to each section.

(37) The third section is usually denominated the "General" sec-

tion, or the "Private" section. Where this section contains a large number of accounts it is frequently sub-divided, one section being named "General" and the other "Private." See Th. M., par. 185. In some businesses a sub-division is effected by keeping a separate expense ledger, *i. e.*, a ledger to contain all expense accounts.

(38) We believe the accounts in this third section may be conveniently described as Real, Representative, and Nominal. Real accounts are assets, or personal accounts which do not belong to the customers' or creditors' ledgers. Representative accounts are those which "complete the double entry by representing the transactions described or recorded by personal accounts." Nominal accounts are other accounts which are impersonal and record profits, losses, or statistics.

(39) An Expense ledger is sometimes called a Nominal ledger.

The personal accounts contained in this third section generally consists of accounts with officers or partners, accounts with employees (salaries and advances), accounts with agents (commissions, etc.), and loan accounts.

Having shown on what general principles sectionalization is based we will now proceed to illustration.

(40) A corporation doing business in Ohio, Pennsylvania, Illinois, Iowa, Indiana and Missouri desire separate statistics for the territory covered by each traveling salesman. They, therefore, provide three sales ledgers, one each for Ohio and Pennsylvania, Illinois and Indiana, Iowa and Missouri. To prove these ledgers separately they provide separate debit and credit columns for each ledger in cash book and journal, and keep separate sales records for each ledger. The totals of bills to customers are sometimes entered in a sales book from which postings are made, but the most advantageous and labor-saving plan is to post direct from what are generally known as Order Blanks, separate binders being provided for each ledger. See A. B. & A. E., p. 844, Lesson 1, par. 7.

Where a sales book is used it can be arranged departmentally for both sales and credits for returns and allowances and is quite convenient for obtaining monthly totals.

(41) Where the Order Blank system is used separate blanks, printed in red, are used for credits.

(42) At the end of the month recapitulations of amounts of sales and credits are made on separate sheets, and the totals thus obtained posted to Sales account.

We have now progressed in the establishment of our method as follows:

Sales book with separate columns for each ledger, debit and credit, or

Order blanks, with credit blanks printed in red, a separate binder for each ledger, and recapitulation sheets for obtaining totals.

(43) Cash book with separate debit and credit columns for each ledger.

Journal for cross entries with separate debit and credit columns for each ledger.

(44) Where the volume of sales is very large, special cash books and journals are frequently used for customers' accounts, the totals being transferred each night to the General Cash book and General Journal.

(45) The next step is to open separate Sales accounts in the General ledger with each customers' ledger section, and a separate controlling account with each of the three Customers' or Sales ledgers.

(46) These controlling accounts are also called adjustment and representative accounts. See A. B. & A. E., p. 41. Th. M., par 76.

The treatment and use of these controlling accounts are very fully explained in A. B. & A. E., pp. 41-46, and need not be repeated here. By carrying them in the General, or Private, ledger, each representative ledger account represents all the customers' accounts contained in that ledger, and thus centralizes and collects the detail necessary for trial balance in the smallest possible compass, and greatly facilitates the compilation of financial statements.

(47) We have seen the Trial Balance of a large corporation which contained only the following items:

ASSETS.

Cash
Real Estate
Plant Ledger
Inventories
A-K Ledger
L-Z Ledger
Nominal Ledger
Bills Receivable Ledger.

LIABILITIES.

Purchase Ledger
Bills Payable
Capital
Profit and Loss Account
Reserve Account

In this case all property accounts (except cash and real estate) were carried in a small Plant ledger (see A. B. & A. E., p. 883), and all manufacturing and expense or revenue accounts in the Nominal ledger.

(48) The question often arises as to how to handle under this system accounts with persons from whom we buy and to whom we sell.

If purchases are credited to an account in a sales ledger these items will throw out the agreement of the total balance of sales ledger recapitulation with total balance obtained from books from which postings have been made, as shown in controlling account in general ledger. That is to say, the sales ledger will not prove by that amount.

One way of overcoming this obstacle is to keep a memorandum of all such credits and add the total of same to the total of sales ledger balances

and also to the total of purchase ledger balances. This establishes an arbitrary proof not shown by the books themselves, although the trial balance would not be affected. Another way is described in A. B. & A. E., pp. 742-743, and we consider this as preferable.

(19) Where cash debits to customers are very rare such items may be entered in the Private ledger column, thus saving the waste of space suffered by providing separate ledger columns on the credit side of cash. But this involves a double posting—a debit to the customer, and a debit to the representative ledger account in the private ledger, as all items entered in the private ledger must be posted individually into the private ledger. Otherwise that ledger will not balance.

(50) This necessary double posting is frequently overlooked in actual practice, and we do not, therefore, recommend this plan, as it is a difficult error to discover.

METHODS OF PROOF.

(51) Where ledgers are conveniently sectionalized a very efficient method of proving work and locating error is the use of special columns for (52) monthly debits and monthly credits, and balances.

This arrangement permits of easy recapitulation and comparison with totals of books from which postings are made, thus proving debits and credits separately. Some attempt has been made to provide (53) separate ledger columns for cash and journal postings, and one form provides separate folio columns for cash, journal, and merchandise on both debit and credit sides, with the object of making separate recapitulations of the postings from each source. This is reported to work well, so that the form of ledger would be after the following model:

Dr.						Cr.					
Date	Terms	Folios			Debits	Date	Folios			Credits	Balance
		Cash	Journ.	Mdse.			Mdse.	Journ.	Cash		

Another form of ledger, designed with the same end in view, provides one folio column, distribution column for books from which postings are

Date	Terms	Folio	Sales	Journal	Cash	Total	Date	Folio	Cash	Journal	Sales	Total	Balance

made, and a total column for monthly totals.

(54) The much advertised "safeguard" proof is fully explained in

A. B. & A. E., pp. 987-988, and Th. M., Model Sets. The advantages gained by using this form of ledger are:—

1. Totals of monthly debits and credits are obtained.
2. Facility of recapitulation, a number of accounts being written on one page.

The first advantage can be secured on any form of ledger by the use of special columns as previously explained.

The second advantage is rendered nugatory by the frequent transfers rendered necessary by insufficient space being allotted to an account, involving confusion, necessitating journal entries, and often causing more trouble with the trial balance than the system was designed to overcome.

(55) The check figure is thoroughly explained in A. B. & A. E., p. 310 and Th. M., par. 382. The explanation relates to the figure "eleven," and this can be recommended as quick and generally safe.

There are other check figures on the market such as the figures "thirteen" and "nineteen," but their adoption involves considerable trouble, the use of charts, etc. As an example we will illustrate the working of the figure "seventeen":

Portion of Chart.	Sum.	Check Figures.
*17	6	11
*34	7	10
	8	9
51	5	12
68	4	13
*85	3	14
	<hr/>	<hr/>
	33	69

Operation: $*17-6=11$. $*17-7=10$, etc. $*34-33=1$ (check figure of total of sum). $*85-69=16$ and $*17-16=1$ (check figure of total of check figures). From this illustration the ponderosity of these descriptions of check figures can be realized, the work on the check figures involving far more trouble than that required by the actual sum and re-footing.

(56) The slip or "Reverse Posting" system is fully described in the A. B. & A. E., pp. 959-963, and Th. M., par. 381. An interesting variation of this system is to obtain a copy of the postings by fastening a slip of copying paper to a strip of celluloid, using as a blotter. The copying paper gives a good impression of the figures posted, while the celluloid enables the book-keeper to take the impressions in column order.

(57) Double column trial balances and their uses are described and illustrated in the A. B. & A. E., p. 1039.

THE PREPARATION OF BALANCE SHEETS, TRADING STATEMENTS, ETC.

(58) This subject will be treated extensively in Installment No. 4, but we reproduce here an article appearing in the July number of Home

Study, and include an exercise based on that article. The method described will be found worth careful attention, as it can be depended upon to locate errors and greatly simplifies complicated work.

On the compilation of the monthly statements of a business certain changes are made in the figures as appearing on the books of account for the purpose of making the showing more correct according to the facts at the time. It is not desired to make any alterations on the books until the end of the year. Inventory is taken, but

Newspaper & Printing Business										
Accounts	Trial Balance		Newspaper Trading %		Printing Office Trading acct		Profit & Loss		Balance Sheet	
	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr
Advertising		3333.24		3333.24						
Subscriptions		16573.02		16573.02						
Newspaper Production	30785.42		30785.42							
Newspaper Labor	2500.60		2500.60							
Expense	4387.50		4387.50							
Inventory	60.00		58.00	3749.50					3163.50	
Printing Expense	1527.71				1527.71					
Labor	2925.94				2925.94					
Material	3537.25				3537.25					
Sales		9208.50				9208.50				
Inventory		688.25				688.25			688.25	
General Expense	732.90						1485.90		160.00	
Advertising Out	100.00								400.00	
Accts. Receivable	45074.40		622.00						46120.34	
Bills	729.46									
Suspense %	22245.84									
	1775.20								6125.00	
	6125.00									
	2200.20									
	1.00									
J. Andrews	362.73						364.73		1464.73	
W. Summers	1275.00									
Accts Payable	500.00									
Bills	14502.50								16302.50	
Cash & Bank	6000.00								6000.00	
Fixtures & c.	2896.75								2896.75	
Machinery	4560.83								4560.83	
Contracts, Copyrights etc	6255.20								6255.20	
Capital	25000								25000	
Surplus		60000.00							60000.00	
	4882.84								4882.84	
Profit & Loss Newspaper	148620.90		46228.52	55676.56	9100.90	9997.75				
Profit - Printing Office			9438.04				9438.04			
Net Profit & Loss					1798.05		1798.05			
							3324.25			
							11234.89		36669.60	
									3364.26	

* Depreciation 10% on Machinery & Inventory

this also is not entered on the books, although included on the monthly statements. Advertising (\$600) paid for during the month is spread over three months. Special traveling expense (\$270) incurred during the month is treated in the same manner, one-third being charged to newspaper expense. Certain items of the inventory and machinery amounting to \$5,800, are depreciated ten per cent, and \$729.46 is deducted from accounts receivable and added to expense account. Also certain personal accounts contained in the private ledger, amounting to \$1,775.25 are added to the total of general accounts receivable.

These numerous changes make it a very easy matter to fall into some error which will upset the agreement of the balance of the profit and loss account with the balance as shown on the balance sheet. In cases of this sort it is certainly better to use the working balance sheet form shown, making the additions and deductions to the trial balance column in red ink.

Thus "General Expense" is reduced \$280.00, of which \$90 is charged as newspaper expense and \$190 carried as inventory. Of "Advertising Out" \$400 is carried as inventory. Accounts receivable to the amount of \$729.46 are carried to suspense and 50 per cent of the amount written off to profit and loss. The accounts of J. Andrews and W. Summers are incorporated in accounts receivable. All these transactions are clearly shown on the working balance sheet, and it is now a simple matter to make up the monthly statement in proper form.

Suspense Account \$2,200 and \$1,100 deduction shown' on form should have been entered "short."

THE JOURNAL-LEDGER.

(59) Also known as the "Seven Account System." Practically a summarized ledger which can be used to advantage only when the accounts carried can be classified under a few principal headings. One of the advantages of this plan is that no trial balance is required. A good illustration of this form of ledger will be found in A. B. & A. E., p. 760.

(60) The "seven account system" summarizes everything under the following headings:

Stock (Proprietor), Cash, Merchandise, Accounts Receivable, Bills Receivable, Accounts Payable, Bills Payable. These headings may be changed, however, to suit particular conditions.

(61 and 62) We append illustration of a combination Journal, Trial Balance and Ledger used by small banks, which possesses interesting features.

The first column contains daily debits, and the third column daily credits. The middle column contains the new balances, black ink being used for debit-balances and red ink for credit balances. Checks and deposits are footed on a separate recapitulation sheet. The necessary daily balance required by banking exigencies is thus easily secured:

	Daily Totals Dr.	Daily Ledger Balances.	Daily Total, Cr.	
Checks	Deposits.
Certificates of Deposit.....	Certificates of Deposit.
Cash—Today	
Yesterday	
<u>Balance</u>	Correspondent Banks.
Collection and Exch.	Collection and Exch.
Discount	Discount.
Re-discounts	Re-discounts.
Interest	Interest.
Interest	Expense.
Expense	Bills Receivable.
Bills Receivable	Cash.
Correspondent Banks (in detail)	Cashier Checks.
Cashier Checks	Furniture and Fixtures.
Furniture & Fixtures	Other Property.
Other Property (in detail)	
Profit and Loss.....	Profit and Loss.
Capital	Capital.
Surplus	Surplus.
Dividends	Dividends.
	<u>\$25,684 70</u>	<u>\$652,103 87</u>	<u>\$25,684 70</u>	
		\$652,103 87		

(63) In businesses where no sectionalization is attempted, and the proprietors require the regular trial balance presented to them each month,

it is an excellent idea to perform the sectionalization on the first page of the trial balance book, dividing the accounts into assets and liabilities and profit and loss accounts, and inserting net totals of accounts receivable and payable. This furnishes a valuable comparative monthly statement.

(64) A method of balancing auxiliary ledgers not often seen is as follows:

A-K. SALES LEDGER—MAY, 1902.			
Cash paid	\$ 25 50		
Cash receipts		\$1,789 25	
Cash discounts		39 50	
Returns and Allowances.....		116 25	
Bills Receivable		400 00	
Sales	5,097 80		
	\$ 5,123 30	2,345 00	
Ledger Balances, April 30.....	11,456 50		
Ledger Balances, May 31.....		14,234 80	
	\$16,579 80	\$16,579 80	

It will be noted that this method shows the agreement between balances shown by ledger and entries in books from which postings are made. It also shows actual transactions for the month instead of totals for five months of the year, which is certainly an advantage.

ADJUSTMENT ENTRIES AND ADJUSTMENT ACCOUNTS.

(65) Where amounts are paid in advance for value to be hereafter received they should be charged to a special account, and transferred to the regular account from time to time as the value is received. Thus, suppose rent (\$600) is paid every three months in advance, charge it to Rent Advanced account, and at the end of each month transfer one-third to Rent account (or whatever expense account rent is carried in) by journal entry, as follows:

Expense, Dr. to Rent advanced, Cr. \$200.

The balance of Rent Advanced account is an asset of the business. Examples of similar assets are:

Unused stationery, circulars or other advertising matter.

Unexpired insurance.

Proportion of yearly advertising contracts.

Proportion of cost of annual or semi-annual traveling trips, when orders for future delivery are taken.

Another method of adjusting accounts of this nature is to add all such items to the inventory. There is a good deal to be said in favor of this plan, as the accounts on the books are in no way disturbed and there are no journals entries to be made. At the same time these items are entirely hidden from view and masquerade under the protecting wing of the inven-

tory as "quick" assets, whereas in reality they are nothing of the kind.

We think they should be separately specified on the Statement of Assets and Liabilities so that proper attention may be called to same.

Another method is to adjust these values by closing the accounts and bringing down the amounts as new balances. This is the proper method to adopt in the case of Annual Financial Statements, but for Approximate Monthly Statements it involves a great deal of unnecessary trouble.

Still another method is to open an "Adjustment Account" to which all items of the nature described are debited or credited, and afterwards transferred back to the accounts from which they were derived.

Still another kind of adjustment calls for the creation of liabilities for which no bills or demands have been received, such, for example, as proportion of taxes. In this case, no particularly useful purpose is served by recording the item in the ledger. It is quite sufficient to show the estimated liability on the Financial Statement.

(66) We quote from Mr. Joseph Hardcastle in a recent article on the subject of Adjustment of Accounts as follows:

Where in a business there are on hand many bills receivable and many bills payable, as the value in the books are future values, and the books should only represent present values, it is necessary to find the present values, but as the face of the promissory notes can not be altered in the accounts representing them, other accounts must be created which will act as offset accounts to them. To bills receivable account we will call its offset account adjustment account for bills receivable, and as bills receivable account is a debit account, adjustment account for bills receivable will be a credit account, the amount of this account will be the discount on bills receivable, if they should at this moment be discounted. In the case of bills payable account, the offset account, we shall call adjustment account for bills payable and it will be a debit account for bills payable account, being in value the discount on bills payable if they were at this moment discounted.

The two adjustment entries will be:

Interest account debtor to adjustment account for bills receivable. And adjustment account for bills payable to interest account.

At the closing of the books the adjustment account for bills payable will be an asset, personal in its nature, signifying that the holders of our notes would owe us for interest on the bills payable, the amount of interest represented in the adjustment account for bills payable; and the adjustment account of bills receivable is a liability, signifying that if the business was liquidated at this moment we should be liable to the makers of these notes for the amount of interest represented in the adjustment account for bills receivable. In the balance sheet among the assets would be found some such account as present discount on bills payable, and among the liabilities, present discount on bills receivable.

When the books are reopened we shall have two adjustment entries: Say adjustment account for bills receivable to interest account. Interest account to adjustment account for bills payable.

These two entries would close the adjustment entries and concentrate their results in the interest account.

It will be seen that by the adjustments in connection with bills receivable and bills payable, that the interest belonging to the term ended was placed as the

interest of that term, and that the interest account brought down into the assets and liabilities, were in reality personal accounts of the next term, which as time followed on to the maturity of the bills receivable and payable, gradually diminished in value until they vanished, and by entries should be passed into interest, the assets into interest payable, and the liabilities into interest receivable. At the opening of the new term, when we bring these entries into interest account, interest account is made up of assets and liabilities, which in course of time will become economic accounts, i. e., they will be a part of profit and loss account.

While this is scientifically accurate, it is of the nature of unnecessary splitting of hairs. It is, in our opinion, quite legitimate to take good bills receivable at face value, and the principle above enunciated would be found extremely vexatious if strictly carried out.

(67) Where special inducements are offered to customers for cash—10 days, or similar terms, estimated cash discount should be included in the balance sheet. This can be entered on the books by debiting discount and crediting a Cash Discount Adjustment account. This account can be extinguished, on re-opening the books, by transfer to the credit of the regular Discount account. It will be noticed that this estimated discount is a debit on the Profit and Loss account and a negative liability (to Accounts Receivable) on the balance sheet.

(68) In making adjusting entries it is well to bear in mind that all debits to profit and loss accounts must be offset by credits on the balance sheet, and vice versa.

A careful recollection of this rule will sometimes save a lot of trouble in agreeing the balance of the profit and loss account with the surplus shown on the balance sheet.

SUSPENSE ACCOUNT.

(69) A difficulty frequently arises as to the proper treatment of receipts on accounts charged off through suspense account in previous years. Inasmuch as 1899—for example—bore the loss of the account it is perfectly correct for 1901 profits to receive credit for the payment. If this method be adopted it is desirable to show only current year's profits on the main profit and loss account, carrying net profit to a subsidiary account to which items of the kind mentioned, together with profits or losses extraneous to the business, may be debited or credited. When, however, a partial payment is made with a prospect of payment of balance hereafter, we would treat it as follows:

Re-open customers' account and credit an account which may be called "Profit and Loss, 1899," to distinguish it from the current profit and loss account. Debit the partial payment to "Profit and Loss, 1899," and credit current profit and loss account. This will prevent "Profit and Loss, 1901," from receiving credit for a payment which may not be made until 1902.

See A. B. & A. E., pp. 1051-1058, and Th. M., par. 443.

C. C. BARRETT, PRINCE

WM M. DICKERSON, VICE PRES.

CHAS. E. BARRETT, GEOV & TRFAS 1

"AS GOOD AS THE BEST, AND BETTER THAN THE REST."

Indianapolis, Ind.

Voucher No. 249

To _____ Dr. Dated _____

[illegible]

Correct _____ Approved _____ Approved for payment _____
SECY & TREAS. GENERAL MANAGER. PRESIDENT.

SECY & TREAS.

GENERAL MANAGER

PRESIDENT.

A good plan in cases of this kind is to make a recapitulation each month of unpaid accounts and their numbers and carry it as a memorandum, attaching the unpaid vouchers and bills thereto, as transferring items from

month to month and making journal adjusting entries would be a waste of time.

Index all purchase accounts, entering voucher numbers instead of pages. See Th. M., par 444, for best form of Index.

(72) The following is an excellent form of combined check and voucher, which ensures the return of the voucher properly receipted:

ENDORSEMENT.

PAY TO ORDER

COUNTERSIGNED

PAYEE

Indianapolis, Ind. 190 No.

Admiral Veneer and Lumber Company,
INCORPORATED

Pay to the order of \$

Dollars

PAYMENT IN FULL OF BILL ON REVERSE SIDE HEREOF

THE CAPITAL NATIONAL BANK,
INDIANAPOLIS, IND.

SECOY & TREAS.

EXERCISES.

1. See A. B. & A. E., p. 448. Differentiate items of trial balance into Real, Representative, and Nominal accounts.
2. See A. B. & A. E., pp. 446-448. Draw rough sketch of combination Cash Journal suitable for business described, proper provision being made for sectionalization of ledgers. See Th. M., par. 52, 296, 329, 480, 511.
3. Define a Sales Ledger controlling account and explain why the balance of this account will not agree with the aggregate of customers' ledger balances if purchases are credited to a customer's account. How should this difficulty be overcome?
4. Explain why Private Ledger items in a columnar cash book must be posted in detail instead of in total, as is the case with all other columns.

5. Give the "eleven" check figures for the following sum, showing proof with total.

789654
697832
160420
754501
<hr/>
2402407

6. Draw rough sketch of posting slip (Reverse Posting system), suitable for proving a customers' ledger and explain use of recapitulation sheet.

7. (58) From appended trial balance prepare preliminary statements, showing (as per example par. 58) Trial Balance, Trading Account—hats, Trading Account—gloves, Trading Account—hosiery, Profit and Loss Account, Balance Sheet.

TRIAL BALANCE.

	Dr.	Cr.
City Accounts Receivable.....	\$1,979 42	
Country Accounts Receivable.....	2,652 85	
Cash	345 75	
Bank	3,321 63	
Fixtures and Fittings.....	500 00	
Hat Merchandise		\$1,043 00
Gloves Merchandise		679 50
Hosiery Merchandise		1,150 00
Expense	825 00	
Freight	47 60	
Wages	1,185 75	
Accounts Payable		1,985 50
Bills Payable		1,000 00
Capital		5,000 00
	<hr/>	<hr/>
	\$10,858 00	\$10,858 00

Hats Mdse. Account is as follows:

Purchases and Freight.....	\$1,089 90
Returns and Allowances	64 50
Sales	2,197 40
Inventory	401 75

Gloves Mdse. Account:

Purchases and Freight.....	802 25
Returns and Allowances.....	35 00
Sales	1,516 75
Inventory	378 62

Hosiery Mdse. Account:

Purchases and Freight	1,329 50
Returns and Allowances.....	48 75
Sales	2,528 25
Inventory	596 28

Six dollars of hats have been purchased by employes and deducted from wages paid only a memorandum of sale being handed to paying clerk. City accounts receivable have been charged with a bill of hosiery not yet

received from manufacturers, amounting to \$65. A traveling salesman has been paid \$6.50 commission on this order, the amount being included in expense. Make proper adjustments on the statements submitted.

8. (55-56) Mention any interesting examples of adjustment which may have come to your notice.

9. The 18th Century Mercantile Company, having heretofore kept its books by single entry, now decides to change them to double entry. The balances of accounts shown by their books are as follows:

Accounts Payable—Trade	\$ 18,250
Accounts Payable—Wages Accrued.....	500
Bills Payable	175,000
Capital	500,000
Expense Accounts	140,550
Real Estate	150,000
Machinery and Plant.....	310,000
Inventories	65,000
Cash on hand	13,500
Accounts Receivable	190,000

From the sales, purchases and returns records it appears that the net sales to date amount to \$484,500 and the net purchases amount to \$375,950.

We are also informed that rent and taxes accrued to date amount to \$1,750, but this amount does not show on the books.

Make statements showing the present financial condition of the company and trading results. Make the necessary journal entries to carry out the double entry principle.

NOTE.—Marks will be awarded according to the merit of the answers, and these marks will form the basis of award of Certificate of Membership in The International Accountants' Society, at end of course.

Marks possible—100. Average required—75.

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- 30, 40. Sectionalization of Ledgers.
- 31. Impersonal Account.
- 32, 38. Nominal Account.
- 33, 38. Real Account.
- 34, 38. Representative Account.
- 35, 37. General Account.
- 36, 37. Private Account.
- 39. Expense Ledger.
- 39. Nominal Ledger.
- 40. Territorial Sales Ledgers.
- 41. Order Blanks.
- 42. Recapitulation Sheets.
- 43. Ledger columns in cash and journal.
- 44. Special cash and journal for Accounts Receivable.
- 45. Controlling Ledger Accounts.
- 46. Adjustment Accounts.
- 47. Condensed Trial Balance.
- 48. Jobbing Accounts (sold to and bought from.)
- 49. Sales Ledger Cash Debits.
- 50. Double Posting.
- 51. Methods of Proof.
- 52. Monthly Total Columns.
- 53. Distribution columns in Ledger, with illustrations.
- 54. "Safeguard."
- 55. Check figures, with illustration of "17" proof.
- 56. Reverse Posting.
- 57. Double column Trial Balances.
- 58. Proving Monthly Statements.
- 59. Journal Ledgers.
- 60. Seven Account System.
- 61. Combined Journal, Ledger, and Trial Balance, with illustration.
- 62. Bank Accounting.
- 63. Arrangement of Trial Balance Book.
- 64. Balancing Auxiliary Ledgers.
- 65. Adjusting Entries and Adjustment Accounts.
- 66. Inventorying interest on Bills Receivable.
- 67. Estimated Cash Discounts.
- 68. Adjustment Rule.
- 69. Re-opening Lost Accounts.
- 70. Voucher System.
- 71. Unpaid Vouchers.
- 72. Illustration of Voucher Check.

INSTALLMENT III

Theory of Accounts and Advanced Book-keeping

Theory of Accounts and Advanced Book-keeping.

Text Books referred to:

American Business and Accounting Encyclopædia—(A. B. & A. E.)
Thorne's 20th Century Book-keeping and Business Practice. (Th. M.)

(73) **VOUCHER SYSTEM** (Continued.)—Where a voucher system is used it should include all payments except petty cash expenditures. The cashier should be made responsible for these and charged with amounts advanced for the purpose. At the close of each month the petty cash book should be o. k'd. and check and voucher made for amount expended during the month. By this method the cashier will always stand debited with the same amount or special attention will be called to any abnormal increase. (See A. B. & A. E., p. 878.)

For samples of distribution of accounts on voucher journal see A. B. & A. E. inserts on pp. 1052 and 1056.

(74) It will be noticed on the voucher journal of the mining company that each column is numbered. When making out a voucher which covers a variety of accounts the book-keeper fills in the number of distribution account instead of the name, thus saving considerable time. (See A. B. & A. E., p. 1053, Distribution of Supplies.)

(75) Many accountants condemn the voucher system as unwieldy and laborious, and object to a large number of columns because of the danger of entering amounts in wrong columns, and the extra expense of wide books. There is nothing in the first objection if proper care be used, while the columnar system certainly saves labor in posting only monthly totals. Paper should be cheaper than a book-keeper's time, as labor saved means the utilization of his services in other directions.

(76) In designing a Voucher Journal the sundries column should not be overlooked, preceded by separate description and posting columns. Illustrations of this arrangement are given on both inserts to the A. B. & A. E. above mentioned.

For particulars as to "Unpaid Voucher" account in the General Ledger, etc., see A. B. & A. E., pp. 1051-2.

Note.—On p. 1052 of the A. B. & A. E., page 9, the word "credit" should read "debit."

In second installment of this course, page 13, line 17, insert number of page—1058.

[illegible]

The voucher illustrated on pages 13 and 14 of Instalment No. 2 is negotiable and involves the bank in no extra responsibility, but it does not provide for any distribution.

(78) The form illustrated in this installment provides for distribution and is stated to be satisfactory to bankers.

(79) Some of the advantages claimed for the Voucher System may be summarized as follows:

Elimination of ledger accounts with creditors.

Prevention of dishonesty without collusion of several officers.

Easy reference to all data.

Auditing facilitated.

Elimination of acknowledgments, separate receipts, statements, etc.

No danger of paying bills twice.

Armour Packing Company Kansas City, U.S.A. VOUCHER-CHECK	Received from Armour Packing Company. Date _____ No _____	
	_____ \$ _____	
	BEING IN FULL PAYMENT OF WITHIN ACCOUNT	
	_____ Payee	
SPECIAL NOTICE		Receipt only by those having authority to sign and in ink. Paying Banks will not accept unless conditions are complied with
When properly received this voucher check is payable at <i>The Inter-State National Bank, Kansas City, Kans.</i>		Armour Packing Company This Voucher-Check is good only when signed by _____
- Line of fold -		

Banks are requested to make all endorsements below

(80) We append illustration of back of another Voucher Check, together with the user's explanation as to method of checking up vouchers at the close of each month.

"When our bank book is balanced, which is monthly, we assort these vouchers under the different headings and if the amount of all the vouchers or the total amount charged to the different accounts agrees with the total amount as charged against us by the bank in our bank book we are then satisfied that the proper entries are ready to be made in our cash book.

By doing this we only charge to the factory accounts the amount actually expended and only credit the bank with the vouchers actually paid, so that our bank account in our ledger at all times must agree with our account kept by the bank, adding the number of checks issued at any time during the month."

<div>HENCH & DROMGOLD</div> <div>YORK, PA.</div> <div>Check Voucher No. _____</div> <div>\$ _____</div> <div>in favor of _____</div> <div>Payable at the</div> <div>YORK CO. NATIONAL BANK,</div> <div>YORK, PA.</div> <div>BANKS ENDORSE ON THIS SPACE.</div>	<div>Advertising, _____</div> <div>Bolts Nuts and Screws, _____</div> <div>Bills Payable, _____</div> <div>Discount and Interest, _____</div> <div>Expenses, _____</div> <div>Furniture and Fixtures, _____</div> <div>Foundry, _____</div> <div>Freight, _____</div> <div>Iron and Steel, _____</div> <div>Insurance, _____</div> <div>Lumber, _____</div> <div>Machinery, _____</div> <div>Malleable, _____</div> <div>Manufacturing, _____</div> <div>Patterns and Stencils, _____</div> <div>Power, _____</div> <div>Postage, _____</div> <div>Paint, _____</div> <div>Returned Notes, _____</div> <div>Shop, _____</div> <div>Wages, _____</div> <div>DO NOT WRITE OR STAMP ON THIS SIDE.</div>
--	--

(81) CASH AND BANK.—The Cash Journal (combined) is now much used as being more convenient for reference and review than two separate books. The combination is effected by providing debit and credit columns for cash. All cash receipts are debited to cash and credited to account affected; all cash expenditures are credited to cash and debited to account affected, the debits and credits to cash involving that much-extra labor as compared with the work on a separate cash book.

There are two methods of arranging the columns on a cash journal. One is to place all the debits on the left-hand page and the credits on the right-hand page. (See A. B. & A. E. Insert, p. 755.) The other is to place debit and credit columns of each account together. (See A. B. & A. E., p. 303.) The advantage claimed for the latter method is that it shows the proprietor at a glance the status of an account to date, debits and credits being in juxtaposition. At the same time the possibility of entering amounts in wrong columns is undoubtedly increased.

(82) Bank columns are frequently added to both cash books and cash-journals, and the use of these is thoroughly explained in the A. B. & A. E. (see pp. 295-299).

Our illustration gives a neat way of showing on a cash book deposits, checks issued, total receipts and payments, balance at bank and balance on

RECEIPTS						PAYMENTS						
Names	Folio	Ch	Distribution Columns	Totals	Office Balance	Names	Folio	Ch	Check No	Distribution Columns	Bank Dr	Bank Balance
Balance forw'd				745 50		Balance forw'd.					8497 50	
Crossfootting giving total receipts for day				1026 75		Crossfootting giving total checks issued						1894 25
Deposit On Hand					1500	Deposit At Bank					1500	8103 25
				1772 25	1772 25						9997 50	9997 50

hand. It is adapted to a business where all payments are made by check except petty expenditures, for which a separate record is kept.

(83) CHECK REGISTERS are used by many in which to record deposits and checks issued. (See A. B. & A. E., p. 309.) We prefer a cash book such as illustrated above. Those who use the ordinary Check Registers generally write the particulars of checks issued both in the Register and Cash Book, which is an unnecessary duplication of work. By adopting the above form of cash book the filling out of stubs of check book may be dispensed with.

(84) THE DAILY CASH BALANCE BOOK is a modern contrivance. It is made with duplicate pages, the original being placed each morning on the desk of the principal, and the duplicate retained in the book. These books should be devised to meet the special conditions of the business, but we append an illustration of a form which has proved very popular. (See A. B. & A. E., p. 302.)

(85) BILLS RECEIVABLE.—An inventory of all bills receivable on hand should be taken each month and compared with the balance shown by Bills Receivable account.

(86) A large amount of attention has been given in The Book-keeper and Home Study to the best methods of keeping records of Bills

Daily Cash Balance and Report Form.

Copyrighted 1901 by The Book-Keeper Publishing Co., Ltd., Detroit, Mich.

190.....

Cash Balance,

Receipts,

Disbursements,

Balance,

Cash in Bank,

Currency,

Checks,

Coin,

Tickets,

Balance,

Daily Financial Report.

Cash on hand per above statement, - \$

Bills Receivable on hand, - - \$

Bills Receivable in bank for Collection, \$

Total available funds for use to-morrow, \$

Daily Sales Report.

Sales to.....

Sales for to-day.....

Total sales to date.....

\$

Receivable, and we particularly recommend the article by F. H. Macpherson, C. A., which appeared in the September (1901) number of The Book-Keeper.

For the benefit of those who may not have a copy on file we will give a brief summary of the most important features of the article and reproduce the forms.

The case was one where a manufacturing concern sold goods mostly through agents, the latter taking notes from customers made in favor of the company. The agents were debited with goods sold by them and cred-

THE WALKERVILLE WAGON COMPANY LIMITED.
BILLS RECEIVABLE, CURRENT.

Date Recd.	Number of note	Number of Voucher	Name of Maker	P.O. Address	Township	Lot	Con	Account Credited	Address of Agent	Date of Note	Amount
1901 Apr 1	1763	4326	James Johnson	Winton	Apsley	7	11	Thorburn Bros	Winton	Feb 1	50
"	1766	4376	Thomas Jones	Thessalon	Moore	8	5	do	do	"	35
"	5 1767	4400	W. Nixon	Grimsby	Welland			John Connelly	Grimsby	Apr 1	150.00
"	6 1768	373	John Fontene	Windsor				John Fontene	Windsor	"	75.00
"	7 1769	4874	Moses Nye	Walkerville				W. Nixon	"	Mar 1	130.00
"	1770										

(Left-hand Page of Current Bills Receivable)

THE WALKERVILLE WAGON COMPANY LIMITED.
BILLS RECEIVABLE, CURRENT.

Total Credit to Agent	Ledger Folio	Date of Bill	Due Date of Note	Interest Debited	Total Interest Debited	Ledger Folio	Where Payable	Deposited as Collateral	B.R. Certificate	Ledger Folio	Principal	Interest	Folio	Paid Due	P.D. Folio	Ledger Folio	Number of Note	Remarks
		Nov 7		2.00			Walkerville	50.00	17	23							1765	
85.00	76	"	1		2.00	76	do	35.00	17	23							1766	
150.00	357	Nov 1		75	75	357	do				150.00		630				1767	
75.00	452	"	1				do							75.00	17	170	1768	
130.00	260	June 1		2.60	2.60	260	do										1769	
																	1770	

(Right-hand Page of Current Bills Receivable)

ited with the present worth of the notes received in settlement. These notes were deposited by the company as collateral against which advances were from time to time obtained.

The first form is the current Bills Receivable Book, which is sufficiently self-explanatory under the conditions explained above, an account

THE WALKERVILLE WAGON COMPANY LIMITED.
BILLS RECEIVABLE PAST-DUE

Office Number	Name	Post Office	Folio	Amount	Date Due	Due Date	Amount without Interest	Interest to Due Date	Interest to Release	Principal	Interest	Folio	Date	Remarks
1763		July 1901												
1764	James Jones	Westford Ont	23	70	Feby 1	July 4	6	1.05		70	1.05	C 26	July 15	
1792	Tom Ford	St Thomas "	23	32.50	"	1	4	0	48	60	32.50	600	70	" 17 Chas. T. Long Agent
1790	H.C. Morris	Wingham "	23	45	"	1	4	0	67					

being carried in the General Ledger with both Bills Receivable Current and Bills Rceivable Collateral. When a bill is past due it is transferred from Bills Receivable Current book to Bills Receivable Past Due Book.

Mr. Macpherson does not say that a separate account is kept with Bills Receivable Past Due, but we should think it decidedly advantageous, as such

THE WALKERVILLE WAGON COMPANY LIMITED.
BILLS RECEIVABLE, COLLATERAL

Date Deposited	Office Number	Name	Post Office	Due Date	Amount	Int To Due Date	Payable	Interest	Disposition of Paper	Remarks
1901		August 1901								
March 1	1769	John Jones	Bath	Aug 1	50	50	50 00	50 00		
"	2421	David Hume	Paradise	" 1	40	45		40	45 00	
"	2625	Tom Paine	Hades	" 1	75	70			75 00	25 245
					\$165		50	40	75	

bills are no longer available as collateral. The Ledger would then show the following balances :

- Bills Receivable Current—bills on hand.
- Bills Receivable Collateral—bills deposited with bank.
- Bills Receivable Past Due—bills unpaid.

Each Bills Receivable book is indexed, the index showing name of maker and number of note. When a bill is paid a line is drawn through the

Thompson, John Agent.				London, Ont. Year 190....			
July	30th 1900 1751	1752		July			
Feb'y				Aug	30th 1900 1760		
Mar	23rd 1901			Sept			
Apr'l				Oct	7th 1901 2071		
May				Nov			
June				Dec			

entry in the index, so that in order to ascertain the liability of any customer all that is necessary is to turn first to the ledger for the open account and then to the note index for the Bills Receivable.

To keep track of the gross liability of agents on these notes (which bear their endorsement and are charged back to them if unpaid), a card sys-

NOTE SLIP.

No. _____ Name _____

\$ _____ Date Drawn _____ 190. Due Date _____ 190...

Payable _____ Interest _____ percent

Delivered to _____

For _____ 190...

tem is provided as per illustration. On these cards the numbers and amounts of notes received each month are recorded, the pen being drawn through accounts paid or otherwise settled.

The "Note Slip" is filled out when notes are sent to traveling salesmen, banks, or attorneys for collection.

Mr. Macpherson's article is particularly valuable for study where a large number of bills receivable are received in settlement of accounts. In ordinary cases there are, perhaps, two principal points to be considered:

(a) The difference between an account credited with a note and one credited by cash, with a view to further credit if applied for.

(b) The record of bills discounted, or deposited against advances as collateral.

(87) In the first case an account is closed by Bills Receivable, although the actual cash may never be received, *i. e.*, if the note is not met when due, but the fact that payment has not been received may not be noticed by the credit man when a new order comes to hand. A good plan is to have the ledger ruled with two credit columns. Credit Notes received in the outside column and do not rule off the account until the note is paid.

The terms "bill" and "note" have been freely used in the above discussion. We prefer the term "note" for distinguishing purposes, but "bill" is more generally employed.

(88) In the second case, a separate account should be opened for bills discounted, a liability being created to the bank which is discharged when the notes are paid. The entry would therefore be:

Cash—Dr. to Bills Discounted—Cr.

When the customer pays the note the entry would be:

Bills Discounted—Dr. to Bills Receivable—Cr.

(89) In the case of bills deposited as collateral, in ordinary cases a memorandum in the Bill Book to that effect should suffice.

(90) In the agricultural implement business, for example, most accounts are settled by note, and it is found desirable to carry a separate Bills Receivable Ledger with a controlling account in the General Ledger. A suitable form for such a ledger, together with information as to combining in one form both record and ledger, will be found fully covered in the A. B. & A. E., pages 250, 251.

* * *

(91) SYSTEMS FOR RECORDING ORDERS are numerous and varied and, in factories, intimately connected with the general system of cost accounting. At this stage we do not propose to touch on the latter phase.

(92) The following illustration of a combination Order Book, Bill Book and Sales Journal has considerable merit and is full of good suggestions:

As soon as a shipping order is received, it is entered, showing the origin of same, whether by mail, 'phone or drummer. The carbon copy is detached and handed to the shipping clerk, who returns it to the book-

Order No. _____

San Francisco, _____ 19____ Carried Forw'd.
Sold to _____

[illegible]

Sold to.....

O. K. Foreman.....Shipped by.....

ORDER No. _____

186

AMERICAN MANUFACTURING CO.

Make and ship to

Place

Ship View

Terms _____

Transcribed by

Date _____

[illegible]

92-93

man for reference. The advantage of a system of this kind is obvious. We show an illustration of an order blank used in this way.

(94) The following is an Order Blank used also as a Stock Record. Each class of article on sale has a number and an account is carried with

ORDER No.

Ship to.....

Via.....Express.....

.....Doz.....Doz.....

Book-keepers will charge this order to party named above unless different name appears here:

CHARGE.....

Billed.....

Posted Folio.....

MEMO

DATE SHIPPED.....
Return this to office.

SHIPPED BY.....
Sign name here.

No	Quantity	No.	Quantity	No.	Quantity
1		101		149	
2		102		150	
3		103		151	
4		104		152	
5		105		153	
6		106		154	
7		107		155	
8		108		156	
9		109		157	
10		110		158	
11		111		159	
12		112		160	
13		113		161	
14		114		162	
15		115		163	
16		116		164	
17		117		165	
18		118		166	
19		119		167	
20		120		168	
21		121		169	
22		122		170	
23		123		171	
24		124		172	
25		125		173	
26		126		174	
27		127		175	
28		128		176	
29		129		177	
30		130		178	
31		131		179	
32		132		180	
33		133		181	
34		134		182	
35		135		183	
		136		184	
		137		185	
		138		186	
		139		187	
		140		188	
		141		189	
		142		190	
		143			

Each number in the Stock Ledger. The quantity record at the right is detachable by perforation. The book-keeper sets down the quantities opposite the number, tears off the record and hands it to the stock, clerk, who posts from thence to the stock ledger.

(95) SALES DEPARTMENT RECORDS.—The great improvement recently developed in card records has greatly facilitated the systematic following up of prospective customers and thereby the securing of orders which in all probability would not otherwise have been obtained. Where a

AA-AL 19

Name *Allison Hart Muzz Co* Buyer *B Young* Phone *Main 4711*

Address *24 Market Street* Business *Wagon Makers* Rating *A-1*

Generally Buys from *Curtis & Co* Supplied with Our Catalogue *E & V 1/4* Salesman *B A Sharpe*

Date of Call	Brief Summary of Each Visit, Quotations, Etc
7/3	Made acq. buyer; left cat. Be in market 8/13
8/13	Not yet ready. Call one week.
8/20	Secured order for \$147 ⁰⁰ well stocked until 1/1
11/2	would place order for \$500 ⁰⁰ if we would give them an extra 5% dis.
11/4	Quoted an extra 5% for a \$750 ⁰⁰ order
11/14	Sent order by mail for \$750. Call in one week

The cards are always filed away in alphabetical order and date tab cards are filed behind each record card, designating the time the next visit should be made. The cards can be looked over each morning, and those requiring attention that day taken out. This renders broken appointments impossible.

95

EXERCISES.

1. On the books of the Clyde Mining Co. (kept by single entry) the following balances are found, no ore having yet been mined and all expenses charged to Development Account.

DEBITS.		CREDITS.	
Mine	\$1,000,000 00	Capital Stock	\$1,500,000 00
Treasury Stock	230,000 00	Accounts Payable	24,956 75
Development or Construction Expense	180,000 00		
Promotion Expense	70,000 00		
Plant	15,000 00		
Buildings	10,000 00		
Cash	21,895 50		

On Treasury Stock account the original debit was \$500,000, and there is a notation that this stock was all disposed of—\$200,000 cash being received for \$430,000 of shares, and \$70,000 of shares being delivered as payment for services in promoting the company.

It is now desired to keep the books by double entry.

Make the necessary journal entries.

2. Define the difference between a cash book and a cash-journal.
3. Where bank columns are used on a cash book state on which side you would place the column for recording deposits and the reason therefor.
4. Where special columns are provided for recording cash discounts state where you would place the "discounts allowed" column and why.
5. If payments by check are posted direct from the Check Register now would this affect the general cash book?

6. On July 13th, 1901, a note was taken from A for \$75.00. This was for money lent him, and as the money was charged to his account, this note should have been credited, but was omitted. In closing the books at the end of the year B. R. account called for \$7,000.00 and the Bill Book said there was \$7,600.00. As the notes and the Bill Book had not been compared for a couple of years the amount that was over was placed to the credit of Merchandise account. It is now found that later in the year Mr. A. gave a new note for the amount of his account, including the \$75.00 in cash, and that this note had not been credited to his account. How would you adjust this?

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| 73. Voucher Distribution. | 86. Macpherson on Bills Receivable. |
| 74. Numerical System of Distribution. | 87. Ledger Ruling for Bills Receivable Credits. |
| 75. Objections to Voucher System. | 88. Bills Receivable Discounted. |
| 76. Voucher Record Sundries Column. | 89. Bills Receivable as Collateral. |
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REFERENCE:

Thorne's Twentieth Century Book-Keeping and Business Practice

- | | |
|--|--|
| Order Records .....Par. 95, 166, 167, 412 | Voucher System .....Par. 443-447 |
| Bills Receivable .....Par. 40, 371 | Cash Journal .Par. 52, 142, and Model Sets |
| Check Registers .....Par. 27, 60, 311, 312 | Bank Records .....Par. 60, 291, 310 |



INSTALLMENT IV

Balance Sheets, Trading and Profit and Loss Accounts,
Charts, Turnover and Percentages

Balance Sheets, Trading and Profit and Loss Accounts, Charts, Turnover and Percentages

Text Books referred to:

American Business and Accounting Encyclopædia—(A. B. & A. E.)

Thorne's Twentieth Century Book-keeping and Business Practice—(Th. M.)

(96) The construction of Balance Sheets and statistical statements is a matter of great importance in the science of accounts.

It does not fall to the lot of every subscriber to this course to meet complex conditions, but a general knowledge of how such conditions should be met will give the student a much better grasp and comprehension of the objects of high-grade accounting and how results are to be obtained.

As the study of the science of accounts steadily progresses, and additional experience is gained, it is found in all large establishments most desirable to make a careful classification of everything connected with the business prior to arranging the method by which the records of the business shall be kept. By adopting this plan the books can be so arranged as to give the most accurate information in the plainest and least laborious way.

(97) In some cases this classification is made by means of—what are called—"charts." These will be illustrated later on. In other cases the classification is made up in book form, which is equally satisfactory to the accountant who understands his business.

(98) Under the head of "Electric Light Company Accounting" we find on pages 496 to 517 of A. B. & A. E. the general classification adopted by the Street Railways' Accounting Association of the United States, divided into four principal sections:

1. Construction and Equipment.
2. Maintenance.
3. Transportation.
4. General.

The construction and equipment accounts represent assets; the three other sections represent operating expense. Following the classification is a full description of the various items which should be included in each account, and a study of these particulars will be of great value to those who wish to acquire a thorough knowledge as to how to distinguish one class of accounts from another.

(99) Thus, taking the street railroad as an example, we find the main arteries of the business to be the Balance Sheet, and Profit and Loss Account, and proceed as follows—

	Assets.		Liabilities.			
Active.	Fixed.	Passive.	Funded.	Floating.	Reserves.	Capital.
			Divisions of above headings.			
			Sub-divisions of divisions.			

	Expenditures.		Receipts.
Maintenance.	Transportation.		
General Expense.		Operation.	Miscellaneous.
	Divisions of above headings.		
	Sub-divisions of divisions.		

From the chart and attendant particulars specifications of the system of accounting to be used are drawn, and as the relation of each element to the other is clearly shown the operation is greatly facilitated.

(101) RIGHT OF WAY is acquired by purchases of municipal franchises, etc.

(102) RESERVES—It is not usual to carry separate Reserve accounts with each item of maintenance distribution.

(103) A chart for a wholesale and retail coal business is also illustrated:

98-103

BALANCE SHEET

ASSETS	Active	Cash Bank Notes Receivable Wholesale Ledger Retail Ledger	Inventories	Soft	Lump Nut Slack
				Hard	Stove Chestnut Egg Grate
				Coke	Nut Egg
				Wood	
LIABILITIES	Fixed	Real Estate Horses & Wag'ns Investment			
	Passive	Suspense			
	Floating	Accounts Payable Notes Payable			
	Funded	Bonds Sold			
	Capital	Capital Dividend Surplus			

PROFIT AND LOSS

EXPENDITURES	Selling	Salesmen Commission 15th St. Yard Stables Teamsters
	General	Salaries Insurance Advertising Interest and Discount Collections Depreciation Miscellaneous
REVENUES PER TRADING ACCOUNTS	Soft	Lump Nut Slack
	Hard	Stove Chestnut Egg Grate
	Coke	Nut Egg
	Wood	
Sundry Revenues	Interest on Investment	

It will be noted from the chart that it is considered desirable to show the losses or gains on each kind of product handled; and this principle holds good of any business which can be divided into departments, or where consignments are handled. It is not always possible to ascertain the cost of every different kind of article dealt in without the expenditure of an amount of labor which would not be justified, but wherever the books can be arranged to furnish such statistics it will be found of great advantage, giving an intimate knowledge of the operations of the business which cannot otherwise be obtained.

(104) In this case the Trading Accounts will be arranged on the following lines:

CONSTRUCTION OF TRADING ACCOUNTS.
SOFT.

Lump.	
Inventory May 1st.	Sales
Purchases	Inventory June 1st.
Freight, proportion of	
Profit	
	Profit Lump <u> </u>
Nut.	
Inventory May 1st.	Sales
Purchases	Inventory June 1st.
Freight, proportion of	
Profit	
	Profit Nut <u> </u>
Slack.	
Inventory, May 1st.	Sales
Purchases	Inventory June 1st.
Freight, proportion of	
Profit	
	Profit Slack <u> </u>
Total Profit <u> </u>

Total profits from "Soft," "Hard," "Coke," and "Wood" Trading Accounts are carried to the Profit and Loss account.

(105) It will be noted that separate statistics are kept of selling expense. They might be pro-rated over the sales, but we do not think any equivalent benefit would be obtained for the labor.

(106) A comparative statement of sales and selling expense would, however, be desirable, arranged somewhat as shown on next page.

The first line is intended for items, and the second line for totals, thus bringing out the monthly comparisons as clearly as possible. The

selling expense is given in detail as an increase or decrease in respect of any item would be important.

Comparative Monthly Sales Statement																											
Months	Soft				Hard				Coke			Wood	Grand Total	Selling Expense					Gen. Exp.	Age on Ac.	Turnover	Profit %	Net % of Profit				
	Lump	Nut	Slack	Total	Stove	Chst	Egg	Grate	Total	Nut	Egg			Total	Salesmen	Comm	15%	Total									
Jan																											
Totals				7000					2000				2000	1500	20000					2000	10	43	12	33	2000	24	31
Feb																											
Totals																											
Mar																											
Totals																											
Apr																											
Totals																											
May																											
Totals																											
Etc																											

This chart of a telephone company illustrated in Th. M., par. 57, is also instructive as showing a very complete distribution. Under the heading of "Sundry" private line expense should be charged against revenue from private lines, and there seems no reason why the other items included under this head should not be carried to the general section. It appears, however, that in this particular case the attempt is made to sectionalize the actual running expenses of the office under the head of "General."

(107) In the illustration given of a railroad balance sheet the distinction made between assets not immediately realizable and current assets is interesting, as also the classification of liabilities. This illustration will give the student a good idea of the variety of items which go to compose the balance sheet of a large railroad company, and the most approved method of classifying same.

Insurance paid, not accrued, is a passive asset.

Insurance fund is the amount set aside with which to meet claims for damages in case of accidents.

The invested balance of sinking fund in the hands of trustees is not in any way available.

The unpledged securities in the treasury would in a commercial balance sheet be classified as fixed assets.

(108) PERCENTAGES are taken both on turnover and gross profit. For method of obtaining turnover see A. B. and A. E., pp. 1034 and 1049.

The reasons why it is considered preferable to base percentages on turnover rather than on sales are admirably explained in an article by H. Greenman, C. P. A., which appeared in the June (1902) number of The Book-Keeper and is now reproduced.

It is important that every subscriber should understand this difference between taking percentages on sales, and on turnover, because in the profession of auditing it is necessary to success to know how to present reports in the right way, and to tabulate the right kind of statistics.

RAILROAD BALANCE SHEET

ASSETS.

CAPITAL ASSETS.

Cost of Road:
 Cost of Southern Railway Properties to June 30, 1903.
 Additions during the year.
 Total Cost of Road June 30, 1904.

Cost of Equipment:
 Cost of Southern Railway Equipment to June 30, 1903.
 Cost of Equipment charged to Capital during the year.
 Trust Equipment received with Purchased Properties.

Total Cost of Equipment June 30, 1904.

Leasehold Estates:

Road.
 Equipment.

Total Leasehold Estates.

Southern Railway Trust Equipment.

Total Cost of Road, Equipment and Leasehold Estates.

Cost of Securities Pledged or Held for Control:
 Pledged under First Consolidated Mortgage.

Pledged under Divisional and Collateral Trust Mortgages and North Carolina Railroad Lease and other Indentures.

Pledged to secure Southern Railway Certificates of Indebtedness and Southern Rwy. Collateral Trust 4 per cent. 2-5 Year Bonds.

Securities in Treasury unpledged, held for control or as muniments of title.

Cost of Road, Equipment and Securities Held as Stated.

Material and Supplies on Hand.

Rails and Fixtures Leased.

TOTAL CAPITAL ASSETS.

Miscellaneous Securities Owned—in Treasury unpledged.

Bills Receivable—deferred, but secured.

Advances to Subsidiary Companies.

Income Accrued, Not Due.

Insurance Paid, Not Accrued.

Insurance Fund.

Sinking Funds—Uninvested Balances in hands of Trustees.

ASSETS IN SUSPENSE.

Miscellaneous Current Securities.

Cash in hands of Treasurer, Banks and Financial Agents.

Cash in Transit from Agencies.

Due from Agents and Conductors.

Due from United States Postoffice Department.

Due from Other Transportation Companies.

Due from Individuals and Companies.

Bills Receivable—Current.

LIABILITIES.

CAPITAL LIABILITIES.

Capital Stock:

Common.

Preferred.

Total.

FUNDED LIABILITIES.

Southern Railway Mobile & Ohio Stock Trust Certificates.

Funded Debt.

Outstanding Securities of Leasehold Estates. (Per contra.)

LIEN LIABILITIES.

Equipment Obligations:

Southern Railway Car Trust, Series A.

Southern Railway Equipment Trust, Series B.

Southern Railway Equipment Trust, Series C.

Southern Railway Equipment Trust, Series D.

Miscellaneous Equipment Contracts.

Unmatured Balance of Purchase Price of North-eastern Railroad of Georgia.

Unmatured Balance on Real Estate.

Unmatured Balance on Hartwell (Ind.) Branch.

Total Capital, Funded and Lien Liabilities.

RESERVES.

For Maintenance of Way.

For Maintenance of Equipment.

For Insurance Fund.

Miscellaneous.

Interest and Rentals Accrued, Not Due.

Taxes Accrued, Not Due.

Reserve for Dividends Nos. 12 and 14, 2½ per cent. on Preferred Stock, payable in October, 1903 and 1904, respectively.

CURRENT LIABILITIES.

Interest and Rentals Due and Unpaid, including amount due July 1.

Audited Vouchers.

Material and Supplies in transit, not vouchered.

Unpaid Wages, including June Pay-Rolls.

Freight Claim Authorities Outstanding.

Due Other Transportation Companies.

Due Individuals and Companies.

Profit and Loss.

The object of percentage is to obtain a reliable index of the changes, from period to period, in the financial and statistical data of an undertaking. To the proprietor or investor none is of so much importance as the earning power when expressed by the ratio of profits to output value. But as this value is measured by both turnover and sales, a selection is necessary. Before this can be done intelligently, it must first be determined what is meant by earning power.

Investment is the substance of business enterprise. It demands a return proportionate to the risk. A going concern is supposed to yield such return and the ability so to do is its earning power. Investment goes into plant, material and operation, the use and the cost of which is absorbed by turnover which thus becomes the highest efficiency obtainable from investment whether represented by the contributions of partners, and stockholders or the excess of credit obtained over credit given. Of more importance to the investor than the percentage of return actually received is a reliable exhibit of the factors contributing to that return as they have a direct bearing upon the stability of the investment. Uniformity of returns on investment may co-exist with a diminishing earning power owing to the necessity of increased business to maintain uniformity of profits or with an increasing earning power owing to the ability to maintain uniformity or profits on a decreased business. The one condition reflects competition and strained credit—the other conservative management and the upbuilding of credit. A comparative expression of earning power discloses to the investor the existence of stable or unstable conditions and as turnover is the elaborated investment it should be selected as a base in calculating earning power by setting up against it the profits. This further appears to be borne out by an analysis of the practical side of the question. In the subjoined examples the same output (quantity) is assumed for each period.

EXAMPLE NO. 1.

	Cost	Sales	Profit or Loss	E. P. on Cost	Comparative Inc. or Dec.	E. P. on Sales	Comparative Inc. or Dec.
1st Period	5,000	7,500	+ 2,500	+ 50%		+ 33⅓%	
2nd "	5,000	6,000	+ 1,000	+ 20%	Dec. 60%	+ 16⅔%	Dec. 50%
3rd "	5,000	4,000	— 1,000	— 20%	Dec. 140%	— 25%	Dec. 175%

EXAMPLE NO. 2.

	Cost	Sales	Profit or Loss	E. P. on Cost	Comparative Inc. or Dec.	E. P. on Sales	Comparative Inc. or Dec.
1st Period	5,000	10,000	+ 5,000	+ 100%		+ 50%	
2nd "	8,000	10,000	+ 2,000	+ 25%	Dec. 75%	+ 20%	Dec. 60%
3rd "	12,000	10,000	— 2,000	— 16⅔%	Dec. 116⅔%	— 20%	Dec. 140%

It will be noted that cost is a constant factor. Comparing the second period with the first shows a decrease in earning power based on a cost of

60 per cent and based on sales of 50 per cent. The decrease in profits (\$1,500) confirms the comparative decrease as based on cost (60 per cent). Comparing the third period with the first, the decrease in profits (\$3,500) again confirms the comparative decrease as based on cost (140 per cent).

It will now be noted that sales is the constant factor, it being assumed that cost of same output increases while proceeds of sales remain stationary. It has been contended that turnover should be used in calculating percentages because it does not vary. As applied to the elements that go to make up turnover, such as cost of labor, material, expense, etc., it is self-evident. But in dealing with profits an element is encountered which contributes to neither turnover nor sales and is an unknown quantity until both have been established. In example No. II. the conditions appear to favor the selection of sales as a base of calculations because they do not vary and to further establish the general principle that the selection of turnover or sales is dependent upon which more nearly approaches a uniformity in the periods under comparison. Inasmuch as the comparative figures in example No. II. using sales as a basis agree exactly with those in example No. I., using cost as a basis, that is a decrease of 60 per cent in E. P. as measuring a decrease in profits from \$5,000 to \$2,000 and a decrease of 140 per cent as measuring a decrease of profits from \$5,000 to \$2,000 loss—the conclusion that either turnover or sales may be used under varying conditions, seems plausible. But in the second period the investment of \$5,000 is no longer adequate. An increase of investment of \$3,000 is required and this shares in the profits, leaving to the original investment of \$5,000 a five-eighths interest in the profits (\$1,250) which shows an actual decrease in profits of \$3,750. This is exactly measured by the decrease as based on cost (75 per cent). The same argument applied to a comparison of the third period with the first will show that the original

EXAMPLE NO. 3.

	Cost	Sales	Profit	E. P. on Cost	Inc. or Dec.	E. P. on Sales	Inc. or Dec.
1st Period	5,000	7,500	2,500	+ 50%		+ 33⅓%	
2nd "	9,000	15,000	6,000	+ 66⅔%	Inc. 33⅓%	+ 40%	Inc. 20%

investment of \$5,000 faces an actual decrease in profits of \$5,000 plus five-twelfths of \$2,000, equal \$5,833.33, which again is exactly measured by the comparative decrease as based on cost (116 and two-thirds per cent).

The use of sales is not only unscientific but misleading. Let it be assumed that a business shows the following features:

The proprietor requires a greater investment to meet trade conditions. Getting down, perhaps unconsciously, to the science of cost accounts he has roughly calculated the increase in earning power as 33 1/3 per cent and

has interested capital on that basis, subject to verification from annual statement. The faithful book-keeper can see no further than the conveniently compiled sales and goes on record as certifying to an increase in earning power of 20 per cent. The proprietor is forced to drop negotiations and secures what consolation he can from the thought that "he never did understand book-keeping."

(109) For illustration we will assume that in this coal and wood business the Inventory on May 1st was \$10,000, and on June 1st, \$7,000. The summarized trading account will be:

Inventory, May 1.....	\$10,000 00	Sales	\$20,500 00
Purchases and Freight.....	8,500 00	Inventory, June 1.....	7,000 00
Gross Profit	9,000 00		
	<hr/>		<hr/>
	\$27,500 00		\$27,500 00

TURNOVER.

Inventory, May 1.....	\$10,000 00
Purchases and Freight.....	8,500 00
	<hr/>
	\$18,500 00
Less Inventory on hand.....	7,000 00
	<hr/>
Turnover, or cost of goods sold.....	\$11,500 00

The comparative percentages on turnover will show whether expense is increasing or decreasing in proportion to increase or decrease of sales.

The comparative percentages on gross profit should show whether profits are uniform with increase or decrease of business, as if the percentage on turnover is normal, while the percentage on gross profit is higher, it shows that the same amount of goods has been sold for less money.

(110) The arrangement of what are generally known as "nominal ledger accounts" should receive particular attention. They can be conveniently kept either by the "loose leaf" or "card" systems, in sections for assets, liabilities, selling expense, general expense, trading accounts. Each section should (111) be provided with a guide card as per illustration, and each account should have a special tab as shown.

This device not only does away with an index, but provides instantaneous reference. The accounts always remain exactly in the same order, for if a loose leaf or card becomes filled it is simply necessary to insert another loose leaf or card.

The cards, or loose leaves, are arranged in the order in which they appear on the financial statements, and if it is desirable to change this order the accounts can also be changed.

(112) Each section of this ledger can be proved separately by providing separate groups of columns in cash book, journal, and auxiliary books.

Floating and Capital Liabilities,
Profit and Loss and Trading Revenues and Expenditures,
And submit:
Chart of Classification,
Balance Sheet,
Trading Account,
Profit and Loss Account.

TRIAL BALANCE DECEMBER 31, 1900.

	Dr.	Cr.
Land	\$ 57,500 00	.....
Buildings	175,000 00	.....
Machinery	200,500 00	.....
Patents	25,000 00	.....
Patterns	15,000 00	.....
Sundry Debtors	86,000 00	.....
Cash	400 00	.....
Office Furniture	2,250 00	.....
Stock on hand, January 1, 1900.....	144,275 00	.....
Purchases	200,000 00	.....
Sales .....	.....	\$ 454,750 00
Returned Purchases .....	.....	1,000 00
Returned Sales	4,000 00	.....
Taxes and Insurance	2,825 00	.....
Workmen's Wages	95,000 00	.....
Office Salaries	10,000 00	.....
Freight and Duty.....	23,500 00	.....
Manufacturing Expenses	5,800 00	.....
Office Expenses	4,125 00	.....
Advertising	4,250 00	.....
Discounts on Sales.....	6,000 00	.....
Discounts on Purchases.....	.....	750 00
Bank Charges	1,675 00	.....
Bad Debts	4,900 00	.....
Directors' Fees	5,500 00	.....
Interest on Mortgage Payable.....	5,000 00	.....
Bills Receivable	55,250 00	.....
Capital Stock .....	.....	500,000 00
Mortgage Payable .....	.....	125,000 00
Creditors on Open Account.....	.....	48,000 00
Bank Overdraft .....	.....	4,250 00
	\$1,133,750 00	\$1,133,750 00
Inventory December 31, 1900.....	\$150,000 00

INDEX TO INSTALMENT IV

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|--|--|
| 96. Construction of Balance Sheets. | 104. Construction of Trading Accounts. |
| 97. Classification of Accounts. | 105. Selling Expense. |
| 98. Electric Light Company Classification. | 106. Comparative Statement of Selling Expense. |
| 99. Chart of Accounts. | 107. Railroad Balance Sheet. |
| 100. Preliminary and Organization Expenses. | 108. Percentages. |
| 101. Right of Way. | 109. Illustration of Percentages. |
| 102. Reserves. | 110. Sectionalizing. |
| 103. Coal Business Classification and Chart. | 111. Illustration of Ditto. |
| | 112. Proving Sections Separately. |

REFERENCES:

Thorne's Twentieth Century Book-keeping and Business Practice

Charts .....Par. 57, 98, 347, 354	Accounts .....Par.187 and Model Sets
Balance Sheets ...Par. 25 and Model Sets	Percentages .....Par. 174 and Model Sets
Trading Accounts Par. 241 and Model Sets	Turnover .....Par. 243 and Model Sets
Profit and Loss	

INSTALLMENT V.

Comparative Statements, Capital Stock, Bonds, Etc.

Comparative Statements, Capital Stock, Bonds Etc.

Text Books referred to:

American Business and Accounting Encyclopædia—(A. B. & A. E.)

Thorne's Twentieth Century Book-Keeping and Business Practice (Th. M.)

(113) The presentation of summarized periodical statements, or reports, which shall clearly exhibit all the operations and results of a business, is an important part of the work of the accountant in charge of the accounts of a manufacturing business.

(114) We append a sample of such a report in connection with a Tanning Co., in which the various operations of the business are very intelligently arranged and tabulated:

	Previously Reported		Month		Total to date		Inventories		Ledger Balance	
<u>Sales</u>										
Leather	50000	00	25000		75000		25000	00	50000	
Merchandise	2000		1000		3000				3000	
Scrap & Hair	1000		500		1500				1500	
Totals	53000		26500		79500				54500	
<u>Operating Expenses</u>										
Plant										
Real Estate	500		100		600		50000		50600	
Mchy. Tools & Equip.	1000		500		1500		25000		26500	
Horses & Wagons	300		100		400		5000		5400	
Totals	1800		700		2500				82500	
<u>Manufacturing</u>										
Hide	15000		10000		25000		100000		125000	
Bark	2000		1000		3000		10000		13000	
Tallow	500		500		1000		5000		6000	
Oil	100		300		1000		3000		4000	
Lime	400		100		500		1000		1500	
Fuel & Lighting	2000		1000		3000		2000		5000	
Rope & Paper	300		200		500		2000		2500	
Mfg. Supplies	500		500		1000		2000		3000	
Labor	20000		10000		10000				30000	
Totals	40800		24200		65000				190000	
<u>General</u>										
Office Furniture	300		900		1200		5000		6200	
Books & Stationery	150		50		200		1000		1200	
Salaries	1300		700		2000				2000	
Traveling	700		300		1000				1000	
Advertising	200		100		300				300	
Interest & Coll'n	150		50		200				200	
Tele. & Post	70		30		100				100	
Misc. Expense	700		300		1000				1000	
Totals	3570		2430		6000				12000	
<u>Other Items</u>										
Leather Purch'd.	500		100		600				600	
Mdse.	300		50		350				350	
Totals	800		150		950				950	
							236000			

					Ledger Balance	
					Dr.	Cr.
<u>Capital Accounts</u>						
Capital Stock						500000
Stock Certificates					200000	
Treasury Stock					300000	
Surplus						21150
Profit & Loss					200	
<u>Profit & Loss Accts</u>						
Sales	Prev. Repts.	Month	Total			
Leather	50000	25000	75000			50000
Merchandise	2000	1000	3000			3000
Scrap & Main	1000	500	1500			1500
Totals	53000	26500	79500			
<u>Operating Expenses</u>						
Plant	1800	700	2500	82500		
Manufacturing	40800	24200	65000	190000		
General	3570	2430	6000	12000		
Other Items	800	150	950	950		
Totals	46970	27480	74450			
<u>Working Assets</u>						
Cash on hand & on Dep.		25000				
Bills Receivable		18100				
Accounts " Current		75000				
Total		118100		118100		
<u>Other Accounts</u>						
Suspense (Doubtful a/c)		5000				
III. Leather Co Stock		20000				
Total		25000		25000		
<u>Liabilities</u>						
Accts. Payable		53100				
Bills		30000				
Total		83100				83100
				658750		658750

BALANCE SHEET.

ASSETS

\$ 25,000 00
 75,000 00
 18,100 00
 20,000 00
 5,000 00
 236,000 00
 30,000 00
 200,000 00

Cash and Bank.
 Accounts Receivable.
 Bills Receivable.
 Investment.
 Suspense.
 Inventories.
 Treasury Stock.
 Stock Certificates.

LIABILITIES

Accounts Payable\$ 53,100 00
 Bills Payable 30,000 00
 Capital Stock 500,000 00
 Surplus, 1903 21,150 00
 Current Surplus 4,850 00

\$609,100 00

\$609,100 00

PROFIT AND LOSS ACCOUNT.

Dr.		Cr.
200 00	Balance forward.	
	<hr/>	
	OPERATING EXPENSE	
82,500 00	Plant.	
\$190,000 00	Manufacturing.	
12,000 00	General.	
950 00	Other Items.	
	<hr/>	
	REVENUES	
	Leather	\$ 50,000 00
	Merchandise	3,000 00
	Scrap and Hair.....	1,500 00
	Inventories	236,000 00
4,850 00	Surplus	
<hr/>		<hr/>
\$290,500 00		\$290,500 00

(115) The proper arrangement of the items of a balance sheet is fully discussed in A. B. and A. E., pp. 164-173, including illustrations of styles known as American, Continental, and English. Also see Th. M.

We think it useful to append a discussion as to the proper treatment of capital stock arising from an inquiry made by a member of the N. A. A. B.

FIRST INQUIRY.

(116) A corporation organizes with authorized capital of \$300,000.00, \$100,000.00 of which is used as promotion stock, to be distributed among the promoters in accordance with amounts subscribed by them.

A block of \$100,000.00 has been subscribed by the promoters, payable in four installments, monthly, but it was put on the market at 25 per cent of its nominal value, or at 75 per cent discount.

The managing board voted \$5,000.00 of regular stock as compensation for knowledge, formulas, and extra services of the superintendent.

What are the proper entries for all stock, what shall constitute Treasury stock, if any, and give disposition of discount on stock?

In cases of this kind it is generally desired to show capital stock on the books as fully paid up. This may be accomplished by debiting "Discount on Stock," together with the amount donated to the superintendent (\$5,000) to "Goodwill, Formulas," etc.

The honest way, however, is to debit the discount to a stock discount account, carrying the amount on the books as a fictitious asset and gradually writing it off from profits. That proportion of the stock remaining unsubscribed is carried in a treasury stock account. By the latter method, therefore, the entries would be as follows:

\$300,000 00

Capital	\$300,000 00
Subscription Account.	
Formulas, etc.	
Promotion Stock.	
Disct. on Stock Sold.	
Treasury Stock.	
Cash.	
Subscription Account	300,000 00

SECOND INQUIRY.

The promotion stock is divided among ten promoters, and arranged for in the articles of association, and the suggestion has been offered to represent all of the stock in the stock ledger at par, and declare dividends upon face value, but to avoid fictitious assets in the general books in view of taxation, etc., by eliminating all fictitious entries and record only actual assets, offset by the same amount of paid up capital.

What advantage is there in representing stock as fully paid on general books of account?

The corporation wishes to prevent the accumulation of fictitious assets and asks if there is any good reason for not using the following entries:

5,000 00	(Formulas, etc., Voted Superintendent)
\$25,000 00	(25% of \$100,000.00 sold)

Capital.....\$30,000 00

This places the first \$105,000.00; then when the second block of \$95,000.00 is put on the market, treat it likewise, leaving promotion stock as a record on stock books only, then capital account will represent only actual property invested, and increased as fast as stock is sold until all is placed, whereby assets will equal capital.

Should the second block be placed on the market, say at 50% the suggestion is to represent it

\$47,500 00 (50% of \$95,000.00 sold.)

Capital.....\$47,500 00

Would not the secretary of the association have less difficulty in satisfying inquisitive parties interested if he can show actual assets on the general books, or would general custom approve of this method as being the proper way of disposing of such organizations.

In other words, what would be the proper method of representing the situation and not represent stock as fully paid on the general books?

ANSWER.

In our recent answer we predicated that the company wishes its stock to appear as fully paid up, as this is usually the case in the United States. In Great Britain, where the balance sheets of corporations are open to intending investors, it is usual to show both authorized capital and paid up capital, (See A. B. and A. E. 169), the authorized (or nominal) capital being carried as a memorandum.

This is undoubtedly the honest way of arranging the accounts of a corporation, but for purposes of obtaining credit it seems usual to resort to various devices to show a large capital "fully paid." For example—a certain corporation is incorporated for the purpose of selling a patented device. Capital stock to the amount of \$100,000 is issued, and the patentees sell their patent to the company for \$90,000, receiving stock in payment. They then advertise a company with authorized capital of \$100,000 "fully paid up" although only \$10,000 cash has been invested. The patent is probably ridiculously overvalued and a gross deception is practised on the public. Corporation publicity would doubtless remedy this evil and compel the publication of statements showing what is cash capital and what in too many instances is dead-wood or water.

There is nothing whatever to prevent a corporation showing conditions in their true light if they so desire, and in this case the entries and general presentment you suggest are entirely in order.

If dividends are to be paid on face value of stock this dividend will be included in the general books, and, therefore, the par value of stock should also be included on the general books, as otherwise the books will show that dividends have been paid in excess of the amounts called for by the capital stock account. (See Th. M. corporation reference dictionary.)

(117) The appended balance sheet of the G. H. Hammond Packing Co. is interesting and instructive, both on account of the arrangement and the items. It will be noted that on the one hand working capital is obtained by the mediums of Certificates of Indebtedness, Loans, and Mortgage Debentures, while on the other hand outside investments are made with Capital Stock, Surplus, and Undivided Profits. This condition appears to disclose the fact that The G. H. Hammond Co. can make a profit by borrowing and re-investing. No indication is given that these investments are in the nature of Sinking Funds required by the by-laws of the company, and "Special Surplus" is undoubtedly the Reserve Fund.

BALANCE SHEET.

ASSETS.

Accounts Receivable—

- a.* Agencies.
- b.* Branch Houses (Incorporated).
- c.* Commission Houses.
- d.* Customers (Trade).
- e.* Railroads.
- f.* Sundry.

Bills Receivable.

Cash in Bank and on Hand.

b. Prepaid Freight.

Consignments—*a.* Products.

Franchises, Goodwill, etc.

Hammond Packing Co.

Inventories—*a.* Live Stock.

b. Raw Materials.

- c. Finished Products.
- d. Supplies in Departments.
- e. Ice.
- f. Repair Materials.
- g. Store House.
- h. Tools and Implements.
- i. Claims, Estimated Value of.
- j. Insurance Premiums Unexpired.
- k. Interest paid in Advance.
- l. Mileage Not Charged.
- m. Rents Not Charged.

Investments—*a.* Capital Stock.

b. Surplus.

c. Undivided Profits.

Real Estate, Buildings, Plant, Machinery,
etc.—

a. At Hammond, Ind.

b. At South Omaha, Neb.

c. Agencies and Branches.

Rolling Stock.

LIABILITIES.

Accounts Payable—*a.* Sundry.

b. Vouchers.

Advances Against Consignments.

Bills Payable.

Capital Stock.

Certificates of Indebtedness.

Hammond Packing Co.

Loans.

Marine Insurance Fund.

Mortgage Debentures.

Special Surplus.

Surplus.

(118) The proper distribution of in and out freight to Trading and Profit and Loss accounts is explained in A. B. & A. E., p. 621.

(119) For the correct treatment of Customers' Discounts on statistical statements see A. B. & A. E., p. 465.

(120) Examples of Comparative Monthly Statements have been given in Installment 4 and in this Installment. As a further illustration we now append the Comparative Monthly Statement of a large brewery, together with what is termed the "going" Profit and Loss Account and Balance Sheet.

Form No. 1 is the Manufacturing account, showing cost of material, manufacturing expense, inventories, cost for the month, and average cost per barrel of finished product. By comparison with other months or with Form No. 1 a fixed "standard" of cost it can be ascertained not only whether cost is normal but which particular items (raw material or manufacturing expense) are over or under standard. In either case, of course, the average per barrel is affected, and this is practically the key to the statement.

As this subject relates to cost accounting it will be referred to again in a subsequent installment.

COST TO MANUFACTURE ETC													
Accounts	On hand Beginning		Bought		Total		Sold or Disp. of		On hand Ending		Cost for Month		Av. Pr.
	Quantity	Valued	Quantity	Cost	Quantity	Amount	Quantity	Realized	Quantity	Valued	Quantity	Amount	Bbl.
Malt													
Hops													
Grits													
Isinglass													
Tartaric Acid													
Irish Moss													
Cold Storage %													
Total Raw Mts.													
Labor - Productive													
" Non "													
Engine Supplies %													
Fuel													
Repairs & Replacing													
Gas & Lighting													
Ins. & Taxes													
Incid. Mfg. Expr.													
Freight													
Govt. Tax													
Total Mfg. Expenses													
BOTTLING DEPT.													Av. Pr. Dz.
Labor													
Labels													
Corks													
Seals													
Wines													
Tin & Cold Foil													
Total Expense													
Bbl. Beer Used													
Total Cost Bbl. Goods													
Beer Pumps												Profit	Loss

Form I

Forms 2 and 3 are Trading accounts and exhibit gross profit

Merchandise Account

BARREL GOODS					
DR	Bbls. Amount		CR	Bbls. Amount	
ON HAND BEGINNING			SALES BY DRIVER NO.		
BREWED THIS MONTH			1		
Cost Raw Materials			2		
Mfg. Expense			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			BREWERY SALES		
			SHIPPING		
			TOTAL SALES BBL. GOODS		
			(Av. Price per Bbl. *)		
			CHARGED TO BOT. DEPT.		
			ON HAND THIS DATE		
GROSS PROFIT BBL. GOODS					

Bottled Goods

DR	Doz Pkts	Doz Qtz	Amount	CR	Doz Pkts	Doz Qtz	Amount
ON HAND BEGINNING				CITY SALES DRIVER NO.			
BOTTLED THIS MO. }				.			
(As shown in detail)				.			
				.			
				BREWERY SALES			
				SHIPPING			
				TOTAL SALES			
				BOTTLED GOODS			
				(Av. price per doz.)			
GROSS PROFIT				ON HAND THIS DATE			
BOTTLED GOODS							

Forms II and III

Form 4 is an excellent type of Profit and Loss account, exhibiting net profit or loss on each department of the business.

(121) Form 5 is the Balance Sheet, and shows the classification of Accounts Receivable, giving an indication of the excellent way in which the accounting work is arranged. (Also see Th. M. par. 25).

Further instructive examples of comparative statements valuable to

(123) Our subscribers have doubtless heard of balance sheet systems of accounting. These systems are practically combinations of cost ledgers with private ledgers, and can be well explained from the five forms of comparative monthly statements above illustrated. The cost ledger will contain the raw material and manufacturing expense accounts, and the totals of each department are transferred to the two trading accounts, which are kept in the private ledger, thus exhibiting the results of manufacturing, selling, and administration for each month, and constituting—when tabulated on chart or balance sheet—what is termed a “perpetual” or “going” balance ledger and balance sheet, the whole corresponding with the statistical statements here presented. There is no novelty in the idea with the exception of concentrating the complete information in one small book.

As this is a very interesting subject to accountants generally, we cannot do better than quote the following explanation of the system as adapted to an ordinary commercial business, as it will be of assistance in presenting a clear elucidation of a system which is claimed to be one of the milestones of accounting progress.

“The Merchandise account is confined solely to a record of merchandise at cost prices. Purchases of merchandise are entered in the Merchandise account at cost, and sales of merchandise are taken out of the Merchandise account at cost and put into the Merchandise Sales account at cost. The sales of merchandise are taken out of the Merchandise Sales account at the selling price and the amount of cash received is put into the Cash account. Under this system gross profit is shown in the Merchandise Sales account, and the Merchandise account proper is not compelled to serve a double purpose as is the case under antiquated and confusing methods.

“Under the antiquated method referred to, the Merchandise account is compelled to exercise two different functions, and as a result two sets of values are entered in it. On the debit side we have the goods at cost and on the credit side the goods at selling prices. In the course of time we find it necessary to return some of the goods that we have purchased because they are unsatisfactory, and in order to debit the sellers’ account with the goods which we return, at proper figures, we must credit the Merchandise account with the goods at cost. We debit the seller, of course, at the same price at which he bills to us. The result is that we get upon the credit side of the Merchandise account goods at cost price. Again, one of our own customers sends back some of the goods that we have shipped him. In order to credit his account, which, of course, must be at selling prices under the old method, we are obliged to debit Merchandise account at the same price, and by this transaction we get selling prices upon the debit side. This sort of thing continues for some time, when we realize that our

Merchandise account is in a condition of complete chaos. Our system of book-keeping necessarily collapses, and we go and take an inventory to ascertain what under a logical system of accounting we ought to know from our records. By avoiding the old-time straddle in the Merchandise account, separating merchandise proper from sales of Merchandise, this periodical state of chaos may be avoided and an inventory only be necessary to ascertain the correctness of our accounts. In other words, an inventory should be merely checking up our merchandise in a manner similar to counting our cash.

"This simple method of dividing the Merchandise account into an actual record of merchandise at cost on one hand and a Merchandise Sales account on the other is perhaps the most important feature of an accounting system adapted to a mercantile concern. In the case of a manufacturing concern there is no difference in principle, the assets in the shape of material being considered a mere transformation of assets previously in the shape of cash. As the process of manufacturing continues, the items of labor, superintendence, insurance, and taxes are added to the actual cost of material, thereby making up the total manufacturing cost. The cost of selling is put into a separate account entitled Commercial Expenses, so as to make a clear distinction between the actual cost of manufacture and the cost of marketing the product."

(124) Cash bonuses to stockholders are treated in the same way as dividends. Also see A. B. & A. E., p. 254.

(125) For treatment of dividends see A. B. & A. E., pp. 467-470. On page 469, line 34, transpose the words "charge" and "credit."

When treasury stock consists of stock unsubscribed it is simply negative to capital stock, and possesses no actual value. If, however, dividends are paid on authorized capital, the dividends on treasury stock represent premiums which will have to be paid by subsequent purchasers of that stock. Treasury stock which has been paid for by a corporation, by purchase from some retiring stockholder, represents an investment, and as it has been purchased for re-sale it is an active asset.

(126) The general question of Capital account is very fully considered in A. B. & A. E., p. 283. If it is desired to increase or decrease Capital Stock it is necessary to file legal notice of same with the Secretary of State, accompanied by certified copy of resolution of stockholders.

Where it is considered desirable to decrease Capital Stock on account of heavy losses incurred, the proper entries on the books would be as follows: We will suppose that a corporation capitalized at \$150,000 suffers losses amounting to \$35,000, and decides to decrease capital stock to \$100,000.

After reciting the authority for the reduction, debit Capital Stock account and credit Reserve account with the amount. Then debit Reserve account and credit Profit and Loss (or whatever account shows the loss) with \$35,000, which will leave \$15,000 standing to the credit of Reserve account for use in future emergencies.

(127) Inquiry is frequently made as to the proper treatment of shares sold at a discount, a practice very prevalent in mining enterprises. It is quite usual for directors to sell shares at 10c on the dollar, and yet wish to show capital as fully paid on the balance sheet. For the promotion of misrepresentation of this kind we can offer no assistance. In the regular way the discount should be debited to a Stock Discount account, and some accountants recommend that instead of showing it on the balance sheet as a fictitious asset it should be deducted from the Capital Stock on the liability side, thus exhibiting net capital as per appended illustration.

Dr.			Cr.
	CAPITAL STOCK.		
	Preferred	\$40,000 00	
	Less discount on 100 shares.....	9,000 00	
			\$31,000 00
	Common	60,000 00	
\$30,000 00	Preferred unsubscribed.		
15,000 00	Common unsubscribed.		
45,000 00	Goodwill and services.		
1,000 00	Cash.		

(128) A denomination of Bond not mentioned in the A. B. & A. E. is the Income Bond, so named because it is entitled to first profits by way of dividend when profits have been earned. Income Bonds are, therefore, similar to Preference Stock, and are not secured.

It may be mentioned here that when an issue of bonds is placed on the market, Bond account should only be credited with amount of bonds sold—not with amount issued. A record of bonds issued should be kept separately.

(129) It is difficult to add to the very complete information on the subject of depreciation contained in the A. B. & A. E. (p. 449, etc.) Depreciation tables will be found in Th. M., par. 98.

(130) It is usual to prepare dividend sheets in large corporations where the stockholders are numerous.

We attach illustration of form.

Semi-annual dividend of 5% declared by resolution of directors dated July 2, 1902.

Names	Addresses	Shares Held	Value	Dividends	When Paid

We will suppose that in addition to the golf course, the club runs a restaurant and a pool room. A separate account should be carried to show cost of the course, and this account may be credited with any revenue derived from the use of lockers, etc.

It is not necessary to charge the whole of this cost to Profit and Loss account at the end of the first year. If the club is a success this cost can, with propriety, be spread over three or more years.

A separate account should be kept with the restaurant, to which all supplies, wages, etc., should be charged and all sales credited. When this account is credited at the end of the year with inventory on hand, it will show the loss or profit made by this department. Restaurants should have "cost accounts" as well as factories, principally in order to keep some kind of approximate check on the chef. A record of purchases should, therefore, be kept, so that month by month the quantities used in proportion to the meals served may be compared. In this way extravagance, wastefulness, or dishonesty may be detected and corrected.

The revenue from the pool room should be separately recorded.

As the greatest part of the business is cash, nothing better than the latest styles of cash registers can be recommended. In the restaurant, the waiters should furnish tickets to the patrons, which will be checked up against the cash register each day.

Some members, however, will run accounts, and these accounts should be kept separate from membership fees and dues.

For a membership register the card system should be used, indexed as desired. The great convenience of this system is that all paid accounts can be removed so that the register will show only members in arrears. Carry an account in the ledger under the heading "Dues." Charge this account at the commencement of the year with the total dues to be collected, and credit "Membership Account," the latter performing the functions of the ordinary sales account.

Thus, on January 1st, 1904, there are 800 members, and the annual dues are \$10.

Dr.	Cr.
\$8,000 00	Dues, 1904.
	Membership account .....\$8,000 00

As collections are made charge cash and credit Dues, 1904 account. Memberships lapsed or cancelled should be credited to Dues 1904 account, and charged to Membership account. The balance of Dues 1904 account will agree with the recapitulation of the membership cards. Cards of members in arrears should be kept in a separate file and check with the previous year's Dues account.

The Balance Sheet of the Club should be arranged somewhat as follows:

ASSETS.

Building and Improvements,
Golf Course,
Less charged off,
Furniture and Fittings,
Restaurant Inventory,
Cash,
Accounts Receivable,
Dues, 1904.
Dues, 1905.

LIABILITIES.

General Accounts Payable,
Restaurant Accounts Payable.

The Club's Profit and Loss accounts will include:

DEBITS.

Rent,
Lighting and Heating,
Insurance,
Repairs,
Entertainments,
General Expense,
Depreciation—Building,
Depreciation—Golf Course,
Depreciation—Furniture and Fittings.

CREDITS.

Membership Account.
Restaurant (including Inventory),
Pool Room.

It may be better to carry a membership account for each year to correspond with the dues accounts. If this plan is pursued the Profit and Loss account of each year will show particulars of the membership receipts.

EXERCISES.

1. From the particulars of accounting for a Golf Club given in this lesson, from a sketch of suitable comparative monthly statement, and explain its use.

2. From the information given in Installment 4 draw a sketch of suitable form of Coal Stock book, and explain its use.

CORPORATION ENTRIES.

A company has been organized to advertise and sell an Anti-Salt Remedy, and to establish an anti-salt institute where patients will be received and cured at a remunerative charge.

The company will be capitalized at five million dollars, of which the promoter will take \$4,000,000 in full payment for the anti-salt remedy. The remaining \$1,000,000 will be open for public subscription on the following lines:

• The first \$100,000 at \$10 per \$100 share.

The second \$100,000 at \$20 per \$100 share. And so on until the last \$100,000 is sold at par.

3. Make the necessary opening entries, it being understood that the following shares have been subscribed :

\$100,000 at \$10 per \$100 share.
 \$100,000 at \$20 per \$100 share.
 \$100,000 at \$30 per \$100 share.
 \$ 35,000 at \$40 per \$100 share.

4. The proper treatment of a separate Inventory account (see Installment No. 1, Exercise 13) does not seem to be generally understood by subscribers.

Illustrate closing entries Feb. 28, from the following particulars :

Dr.				Cr.
		INVENTORY ACCOUNT.		
\$ 9,765 00	December 31.			
10,543 00	February 28.			
		PURCHASE ACCOUNT.		
4,976 50	January			
6,248 75	February	Returns		\$649 50
		SALES ACCOUNT.		
94 85	Returns.	January		\$7,964 00
235 50	Returns.	February		8,755 00

NOTE.—Marks will be awarded according to the merit of the answers, and these marks will form the basis of award of Certificate of Membership in The International Accountants' Society, Incorporated, at end of course.

Marks possible—100. Average required—75.

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- | | |
|---|---|
| 113. Summarized Periodical Statements. | 121. Classification of Accounts Receivable. |
| 114. Comparative Monthly Statement of Leather Business. | 122. Reserve and Sinking Funds. |
| 115. Arrangement of Balance Sheet. | 123. Balance Sheet System of Accounting. |
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| 120. Comparative Monthly Statement—Brewery Business. | 128. Bonds. |
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| | 130. Form of Dividend Sheet. |

INSTALLMENT VI

Standard and Special Ledgers and the Devising of Special Systems of Accounts

American Business and Accounting Encyclopædia—(A. B. & A. E.)
Thorne's Twentieth Century Bookkeeping and Business Practice (Th. M.)

While the work of this Correspondence Course is departmentalized as much as possible, it is impossible in all cases to treat of one department without infringing upon another. Thus ledgers of various kinds are devised to meet the requirements of different kinds of business and come under the heading of "Devising special systems of accounts." But inasmuch as many of these are simple modifications of standard forms it is inconvenient to discuss the former separately from the latter.

See A. B. & A. E., 988 for illustrations. Also Installment 2, No. 44.

[illegible]

(135) One of the chief objections to this style of ledger is the frequent necessity for new ledgers, and the trouble of re-writing names. A bank balance ledger rarely lasts more than six months, or a mercantile balance ledger longer than one year. Another objection is the waste of paper on inactive accounts, one-fourth of an expansive ledger being frequently found unused at the termination of its evanescent career.

Another objection is that, while professing a complete check on accuracy as its particular advantage, it will not detect counter-balancing errors of \$10 or \$100, errors in posting which are quite as common in large businesses, and banks, as transpositions. In a bank this defect may easily result in serious trouble. In a recent communication a bank book-keeper says:

"I extend the total of A's checks ten or a hundred dollars too much. Possibly I extend some other total, maybe a hundred accounts from the other, one ten or a hundred dollars too little. The figures are obtained from the sums of these several extensions balanced against a machine list of the checks, of the sum of the footing of the Clearing House checks and the counter checks. The balances are extended by these wrong footings, and in the Boston Ledger, after such an error is made, there is only one way to find it, and that is by balancing the pass book.

My position is that such errors, while occurring on any system, are exceedingly dangerous on the Boston Ledger unless you check the extension as I suggested, and if they happen to be made on a bad account."

		January				February			
Folio	BALANCE	DEBITS	CREDITS	BALANCE	DEBITS	CREDITS	BALANCE		
For'd									
1									
2									
3									
4									
5									
6	5 244 04	5 244 04	3 522 89	3 522 89					
7	11 538 81	7 164 01	11 153 39	15 528 19					
8									
9									
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
0									
Tot.	16 782 85	12 408 05	14 676 28	19 051 08					
Cash		10 893 05	25 00						
Jour.		1 515 00	14 651 28						
Tot.		12 408 05	14 676 28						

(136) An illustration follows of what is called an "Improved Safeguard" ledger, devised for an electric specialty company.

(137) The loose leaf and card ledgers are practically identical in principle and use to all intents and purposes. Both adapt themselves to minute self-indexing. When posting, the sheets or cards should be removed from cover, or file, and laid upon the desk in order of posting. If this method is adopted it will be found that the work can be accomplished with remarkable rapidity.

(138) In this course we have frequently advised separate accounts for Sales and Purchases, but here is a form of ledger which carries both in one account, at the same time overcoming the objections usually made against such a course.

[illegible]

Like all other books of account, the ledger should be devised to meet the

DATE		PAGE	PURCHASES		RETURNS		NET		DATE		PAGE	GROSS SALES		RETURNS		NET	

(139) We will first take the brewery business, where a ledger after the following form will usually be found:

Sheet No. _____ Account No. _____

Name _____

Address _____

[illegible]

137-139

Our next illustration is a broker's ledger:
(140)

[illegible]

The stocks (which represent the account) are carried forward at the top of each page. Whenever a stock is received or delivered, the previous record is crossed out and the new balance carried into the "long" or "short" column. One can readily figure the standing of an account treated in this way, and speed and accuracy are quite essential, sometimes, when figuring margins in a fluctuating market.

Monthly balances can be quickly taken from this ledger, and the figuring of interest can be done at any spare time, and not left until the first of the month.

We next show a combination Charge Book, Journal, and Ledger, for the Printing business.

[illegible]

The total of the amount column is credited to "Job charges" (representing sales in the printing business), and the balance columns will show the amount outstanding.

As there is one leaf for each customer a recapitulation of the totals of amount columns must be made at the end of each balancing period.

Another form of this kind of book provides a separate amount column for each month, the totals being "carried forward" from page to page as in

an ordinary sales book, but this has been found to involve considerably more labor than recapitulating.

The next example is one of a combination Consumers' Register and Ledger designed for an Electric Light and Gas Company:

(142)

THE ELECTRIC LIGHT								
CONSUMER.	Applica- tion Number.	ARC LIGHTS.					INCANDE	
		No. of Lights.	Descrip- tion.	Rate per Month.	Date of Con- nection.	Date of Discon- nection.	No. of Lights.	Descrip- tion.

AND GAS COMPANY.

SCENT LIGHTS.			REMARKS.	NOVEMBER.			
Rate per Month.	Date of Con- neciton.	Date of Discon- nection.		Balance.	Charges.	Payments.	
						Date.	Amount.

This book is on the tabular system illustrated in our first examples. After the description and remarks columns the balance from previous ledger is entered under the head of the current month (which in this instance is November), then comes the current month's charges and payments. On the opposite page are similar columns for the months of December, January, February March, and a margin for cutting, or perforating, so that on turning the pages the original columns can be used for the remaining months of the year, three on the left-hand page and four on the right-hand page.

A similar ledger is used for the natural gas department of the business with separate descriptive columns for cooking stoves, heating stoves, and miscellaneous connections.

For the artificial gas department a modification of this form of ledger has been adopted, as shown below. The use of this ledger can be readily understood from the foregoing description.

In all these illustrations may be distinctly recognized the effort to devise the most suitable form possible for the conditions to be met, an effort which relates to the most advanced development of accountancy.

Examples of this class of work may also be found in the A. B. & A. E. (143) See combination Church Members' Register and Ledger, p. 312. You will note that this is also on the tabular form, and this particular idea might be used to great advantage in other than church societies.

See also Members' Dues Ledger, p. 996, also in tabular form, running in years instead of months.

(144) See Hands Pay Roll and Ledger, p. 883, for keeping accounts with laborers who receive advances for cash and obtain supplies at the company store. Suitable for mining companies as well as plantations.

(145) See Customers' Record and Ledger, designed for ice business, p. 697, also tabular.

THE ELECTRIC LIGHT							
CONSUMER.	Application Number.	METERS.		REMARKS.	NOVEMBER.		
		Date of Con- nection.	Date of Discon- nection.		State of Meter.	Gas Con- sumed.	Balance.

AND GAS COMPANY.

DECEMBER.										
Charges.	Payments.		Dis- count.	State of Meter.	Gas Con- sumed.	Balance.	Charges.	Payments.		Dis- count.
	Date.	Amount.						Date.	Amount.	

(146) See illustration of combination Bills Receivable Register and Ledger, p. 250.

(147) See illustration of Real Estate Ledger, pages 943, 945.

(148) See illustration of Instalment Ledgers, pages 708, 709 and 711.

(149) "Stock" ledgers do not usually admit of any very great variety. You have a certain quantity of goods on hand, and wish to keep account of quantities sold and balance remaining on hand. Therefore debit quantities received, credit quantities sold, and provide a column for extension of balance on hand.

Examples of special stock ledgers are shown in the A. B. & A. E. on pages 253, 440, 605, 713.

Cost ledgers will be discussed later under the heading of "Cost Accounting."

Other special forms of ledgers very useful to the student for consideration and study in the line of devising special methods for special ends will be found in Th. M., and are here reproduced for the benefit of those who do not possess this work.

(150) Paragraph 5 illustrates a tabular membership ledger suitable for a club or society, the whole twelve months being shown across the two ledger pages from left to right.

(151) A combination bills receivable register and ledger will be found, paragraph 40. A recapitulation of the balances of this ledger should agree

with the balance of bills receivable account in the general ledger. This form is used in the agricultural implement and similar businesses, where almost all accounts are paid by long time notes, payable when crops are sold.

(152) An economical form of sales ledger is illustrated, paragraph 405, being devised with a view to overcoming the difficulty of providing space for an account containing a large number of debit entries and only one or two credit entries, this usually causing a great waste of paper.

(153) In par. 438 will be found a labor-saving form of combination invoice, collection record, and petty ledger. The blank form at the right of perforation is detachable, the duplicate being used as the bill, and the third copy as the collector's record. The original is retained as the ledger account and filed away in alphabetical order.

(154) Special ledgers for the ice and hotel business are shown in paragraphs 458, 459.

(155) Paragraph 482 exhibits combination day book, ledger, and cash book used in retail bakery business, the total cash receipts being recapitulated daily and entered in one amount in the regular cash book. This could not be done with a bound ledger, but is easily accomplished with loose leaves or cards, the accounts being replaced in the cover or tray after the daily recapitulation has been made.

(156) In the commission produce business it is frequently the custom to provide columns on the consignment record showing the amount of commission and amount due consignor. These accounts are kept on loose leaves or cards, no entry being made in relation to consignor either on the consignment record or the general books until the customer pays his account. The consignment account is then referred to and amount of remittance sent to consignor entered thereon until the whole consignment is accounted for, when the account is removed from the file.

Customers are debited in the usual way through a sales record or the order blank system, and commission sales account credited. When remittance is made to the consignor cash is credited and commission sales account debited. The balance of this account will then agree with recapitulation of the commission columns in the consignment record, which also shows exactly what is still on hand belonging to that consignment.

Where the produce dealt in is not of great variety and the card system is used, it will be found useful to provide different colored cards for the stock record of different grades of produce, as this will greatly facilitate reference.

(157) In the installment business where a collection record is necessary, this is sometimes obtained on the card system by printing the days of the month (1 to 31) along the top margin of the card and using movable steel

pointers to indicate due dates of accounts. This will necessitate wide cards, but loose leaves of the standard width do not appear to hold these steel pointers satisfactorily.

Some installment houses provide not only a "balance" column on their ledger cards, but also an "overdue" column, which is found very convenient for indicating without computation how much customers are in arrears.

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132. Ledgers—Balance and Tabular.
133. Ledgers—Tri-monthly Balance.
134. Ledgers—Recapitulation.
135. Ledgers—Bank Balance and Objections.
136. Ledgers—Improved Safeguard.
137. Ledgers—Loose-leaf and Card, and method of posting.
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139. Ledgers for brewery business.
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142. Ledgers for electric light and gas business.
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148. Ledgers—Instalment business.
149. Stock Ledgers (merchandise).
154. Ledgers for ice and hotel businesses.
150. Ledgers for societies.
151. Ledgers for bills receivable combined with register.
152. Ledgers for petty accounts.
153. Ledgers for petty accounts combined with invoice and collection record.
154. Ledgers for ice and hotel business.
155. Ledgers for retail bakery business combined with day book.
156. Commission produce business.
157. Installment business.

EXERCISES.

1. Criticise the three forms of Installment Ledgers illustrated in A. B. & A. E. on pages 708, 709, 711, and submit sketch of Installment Ledger, providing for additional purchases, credit columns sufficient for a month's business on each line, a monthly balance column, an overdue column, dates from 1 to 31 across top margin of form, and illustrating use of steel pointers as described in the lesson.

2. Criticise the two forms of Real Estate Ledgers illustrated in A. B. & A. E. on pages 943, 945, and submit (a) improved form of tenants' ledger as kept by a real estate agency, and (b) form of tenants' and property record for a real estate owner who looks after his own collections, etc.

3. Draw a special form of stock ledger for commission fruit business, dealing exclusively in apples, oranges, and lemons.

4. Refer to form of club or society ledger, paragraph 150, members paying entrance fees, quarterly dues, and fines for arrears. Explain how records are carried in cash book and general ledger for purposes of general proof of work on members' ledger, and obtaining accurate totals for statistical quarterly statements.

5. (Members' Ledger continued.) How would you treat arrears on the books, no membership being cancelled until after dues are two years in arrears?

6. Explain the ledger principle in form illustrated on insert pages 760-1, of A. B. & A. E.

NOTICE

Subscribers will please be careful to write their names and addresses on answers to exercises sent in.

In cases where this is not done we cannot identify the senders.



INSTALLMENT VII
COST ACCOUNTING

Cost Accounting

Reference Text Books: Hall's Manufacturing Cost (H. M.); American Business and Accounting Encyclopaedia (A. B. & A. E.).

In endeavoring to explain the principles and workings of an efficient cost system which can be adapted to suit the requirements of the generality of businesses, it will be best first of all to show why accurate cost accounting has become so important a factor in the accounting world. The enormous expansion and development of commerce has resulted in an equally enormous development of competition, to such an extent, indeed, that some corporations succeed in securing contracts by discounting their bills; *i. e.*, of two concerns in all other respects on an equal footing, one can make a slightly less price than the other through taking advantage of cash discounts.

A writer, named H. S. Seymour, thus describes the necessity for an organized system of manufacturing cost records:

"Probably no information which is placed before the manufacturer, or manager of a manufacturing plant, is of more importance than an accurate computation of the cost of manufacturing each separate article that is made and goes out to the market to be sold.

"A manufacturer who is producing from 100 to 2,000 different articles in his line, with a pay roll of possibly \$10,000 to \$20,000 per week, divided up amongst all classes of producing and non-producing employees, and who is paying out another considerable sum for raw materials, would naturally want the most accurate way possible of knowing what each one of these pieces cost him, especially if the cost of this information were very moderate.

"The manufacturer can readily understand the immense power and advantage he would have in these times of tremendous competition if he knows, accurately, his costs. With this information he can give prices that will gain him the business, and still be sure of profit. His competitor without this information might gain the business by estimating low, and then lose a large sum in filling the contract."

C. J. Watts, in a contemporary publication, says:

"In the present condition of commerce every manufacturer, in order to successfully meet with the competition which exists in all lines of business, must not only have a complete organization in his factory but a system for accounting and recording the operations which will give him easy and rapid access to any detail of the business."

C. A. Millener, in his work on Cost Accounting, makes many excellent remarks, from which we quote the following:

"Accountants and book-keepers are beginning to see that a system of cost accounts can become part of the plan of book-keeping, and to recognize that it is something of immensely greater value than mere clean, beautiful writing, and of equal importance with the proper record and collection of personal accounts.

"It may be safely stated that cost accounts that cannot be reconciled with the actual expenditures, as shown by the general books, are dangerous, and should be used with the same precaution as one handles dynamite.

"But it is precisely the information that the merchant and manufacturer requires, and therefore the book-keeper should make it his business to furnish the facts."

By referring to H. M. section 11, page 75, it will be noted that manufacturers' accounts may be roughly divided into two principal classes:

(158) Class 1 includes those features where special work is made to order.

(159) Class 2 relates to factories where quantities of the same kind of article are manufactured, and where it is therefore possible to establish standard tables of cost.

Examples of class 1 are—Machine shops, yacht and ship builders, foundries, bridge works, blank book manufacturers, etc.

Examples of class 2 are—Boot and shoe manufacturers, ready-made clothing manufacturers, bicycle manufacturers, candy manufacturers, etc.

Many factories combine both classes, such as those where are made standard and special agricultural implements, wagons, carriages, automobiles and furniture.

As an example we will take a furniture manufacturer who makes chairs, tables, couches, ornamental stands, etc. It is not necessary in such a case to install a complex system of time records, as a certain standard of material used and time occupied can be established. One chair of a certain kind and style should cost exactly as much as another chair of the same kind and style. The first thing the manufacturer should do, therefore, is to fix the standards, and then hold the foreman, or superintendent, responsible for maintaining the standard.

The accounting department has now to provide a check on the cost of production which is accomplished by means of a cost ledger. In this ledger open an account with each line of goods manufactured.

In the general ledger open two accounts—a raw material account and a manufacturing account. All bills of raw material are debited as they come in to raw material account.

Each shop order, on completion, will show amount of raw material used and time consumed. Debit cost to account in cost ledger and record comparison with standard, thus:

No. 5 Upholstered Chairs. Standard \$3.15			
			Grade
S. O. 5719	Material.....	\$16.42	
	Labor.....	16.25	3.267

No. 5 upholstered chairs account will always show whether orders are above or below standard, and as a separate "key" will be kept to the standards, showing proportions on which established, the cause of any disparity can be instantly ascertained.

At the end of the month the closing entries will be on the following order:

Debits.		Credits	
	Raw Material		\$5,500 00
\$5,500 00...	Manufacturing Account.		
	For material used as per shop orders Nos. — to —	Wages.....	9,250 00
Wages			9,250 00
9,250 00...	Manufacturing Account.		
	For time reported on shop orders Nos. — to —.		

These entries will correspond with the cost accounts in the cost ledger. The balance of raw material and wages accounts will represent assets; material on hand and used on uncompleted shop orders; time employed on uncompleted shop orders.

Also see H. M. section 13, page 107.

(160)

GENERAL ELEMENTS OF COST.

The general elements of cost of product may be classified as follows:

1. Raw material
2. Cost of manufacture
 - Labor
 - Factory expense
 - Power
 - Salaries
 - Horses and cartage
 - Lighting
 - Heating
 - Supplies
 - Rent
 - Taxes
 - Insurance

In order to grasp the correct principles of cost accounting the best plan will be to formulate a general program of requirements which must be carried out. It will then be much easier to trace the development of a system step by step until it is as complete as we have so far learned how to make it. The difficulty about the majority of articles published on the subject is: that they simply describe what has been done and not WHY it was done.

The general program to be followed may be thus outlined:

(161)

KEY.

1. Record of material ordered.
2. Record of material received and record of material issued from stores and balance on hand.
3. Shop orders.
4. Record of transfers of material from one manufacturing department to another.
5. Record of time expended, and material and stores used.
6. Record of total cost with added percentages of manufacturing expense.

(162)

NO. 1. RECORD OF MATERIAL ORDERED.

This involves order blanks and purchase records. With order blanks generally we are all familiar. They should be made out in duplicate, the duplicate copy being sent to the receiving room. When the material is received it is checked off by the receiving clerk as to quantity, quality, condition, etc., the duplicate order is attached to the invoice and sent to the book-keeper, who passes it through his purchase journal or voucher record.

For example of order blank, see H. M. p. 38.

(163)

NO. 2. RECORD OF MATERIAL RECEIVED AND WHERE LOCATED, ETC.

The receiving clerk is usually also store-keeper. It is his duty to keep account of the disposition of all material and stores received. For this purpose a requisition is made on him for so much material, etc., wanted, for a certain job.

(164)

THE M.R.Co., Ltd.
 ○ REQUISITION FOR STOCK. ○ Date 2 Jan'y 01
 TO MANAGER:
 If approved please issue Factory Orders
 for Stock as follows:

QUANTITY	ARTICLE	ORDERED		REMARKS
		ORDER NO.	QUANTITY	
200	1" Oil Cups, Fig. 1821	K917	150	Last 200 lasted 7 Mos.
200	2" " " " "	K918	200	50 ordered today by M.R.Co.
50	5" Steam Gauges, Fig. 1627	Can import cheaper - See me B.R.C.		

PASSED UPON
 Date 7/7/01

SAC
 MANAGER

SIGNED JEF
 Stock-keeper

FORM I.

Requisitions should be made in duplicate, the duplicate being provided with a form of receipt to be signed by the party obtaining the material, this furnishing a perfect voucher for the store-keeper.

(165) For other illustrations of card stock records showing cost, location and distribution, see A. B. & A. E. page 1019, and H. M. page 48.

High, normal, or low quantities are indicated by movable steel pointers.

A very lucid explanation of the value of this important section of cost accounting will be found in the following quotation from an article on the subject contributed by a well known expert:

"Speaking generally, there are in all factories raw materials, materials in progress, finished parts, and assembled or completed products. A "rough store" and "finished store," it will be found, are, therefore, essential to getting accurate records, all material starting from the "rough store" and working its way to the "finished store" before being finally issued to the assembling room or erecting shop.

Raw materials are ordered as required through the office, and are received on arrival by the store-keeper, who is required to make an independent record of what he receives. This record is sent up to the office, where it is checked against the invoice and original order. A more general system than the above is for the invoice to be sent to the store-keeper, who is supposed to check it off with the material actually received, but this is a very loose system, especially as the store-keeper then knows exactly what material he has to expect, and there is consequently always a direct incentive to scamp the checking. Nothing should be given out by the store-keeper except on properly authenticated orders, such records being kept as will show to whom and on what account materials have been issued.

It is essential that a stores ledger should be kept, in which accounts should be opened for each class or kind of material stocked and the receipts and issues posted up from the stores received and stores issued books. This, of course, means a tremendous amount of clerical labor, but the advantages gained will in most cases far outweigh the extra expense incurred. Some difficulty will be met with in opening this ledger in regard to some of the items, such as waste, oil, tallow, etc., but as these are only chargeable to establishment charges account this difficulty may be overcome by the exercise of a little ingenuity and determination. In arranging the store-rooms it will be well to remember the old adage, "a place for everything, and everything in its place," and have properly labeled bins and pigeon holes provided for storage purposes, for on these the efficiency of the store-rooms will, to a great extent, depend.

All material received is recorded on cards, which are filed and sent into the office every day, where they are checked against the orders and the invoices, after which they are filed for the use of the stores ledger clerk. This ledger, consisting of cards filed in a cabinet, is kept in the office on the theory that if

the store-keeper wants to know what is in the room he should look in the proper place and find it. Material is issued on receipt of card requisitions from the foremen, these cards also being filed and sent into the office every day for the information of the stores ledger clerk. The store-keeper, having thus no clerical work to perform except on the receipt of material, is able to pay much more attention to his ordinary duties. Another method is to provide a "material card cabinet" in the store-room, and require the store-keeper to enter all issues on their proper order card, but this plan cannot be recommended, although it is undoubtedly better than using books for the purpose. In some cases, as a check on waste and carelessness on the part of the foremen, the store-keeper is provided with a list of everything required on each order and is required to honor the foremen's demands to the extent of this list but no further. Should any material be spoiled or lost the foreman must obtain an order from the office before the store-keeper will deliver the material.

No values are inserted on any of the cards at first, and the stores ledger is kept in quantities only. A card index file is kept in the office, showing the fluctuations in price of each commodity, a separate card being used for each, and the prices at which they are to be charged varied accordingly at stated intervals. This makes the cost accounts of much greater value, as market fluctuations are at once apparent. As a check on the accuracy of the stores ledger records the stores ledger clerk is required to send to the store-keeper the names of several articles which are in stock, with a request for an actual count of each. This is done every day, so that in the course of a month every stock account is checked at least once."

It will be noted that the accountant describing this system lays great stress on the store-keeper's record being "independent," his report being checked against the invoices by someone else, the reason being that if the former knows what he should receive he is liable to "scamp" the checking. We think this a poor excuse for duplicating work. It should be possible to employ a reliable man, or to find out that a man is unreliable.

In one establishment we learn that the stores ledger is "kept in the office on the theory that if the store-keeper wants to know what is in his room he should look in the proper place and find it." This is bad theory and worse practice of a kind which should be carefully avoided in business. The work of every employe should be sedulously facilitated—to place unnecessary obstacles in his way is an unpardonable offense, and a grave injury to business interests. We call attention to this matter for the reason that the designer of a cost system should avoid obstructive regulations of this kind, and should see that a store-keeper has access to his own ledger and that the work of every department is equally conveniently arranged.

(166) A complete, or partial, inventory of stores should be taken occa-

[illegible]

(167)

These are usually issued from main office to the superintendent of the factory, a duplicate being retained for reference. The form is usually so arranged as to include particulars of cost of work, these particulars being obtained from

<h1 style="margin: 0;">SHOP ORDER.</h1> <p style="margin: 0;">TOOL ROOM</p>		<h2 style="margin: 0;">R. D. Nuttall Co.</h2>
Date <u>10-30-01</u>		2 3 Customer <u>Iron Trade Review Co.,</u>
R.D.N. Co's No. <u>24641</u>		Address <u>Cleveland, O.</u>
Pur. Order No. <u>86440</u>		Same
		Xpress

Number Ordered	DESCRIPTION OF ARTICLES
15	<p>Per their B.P. 241 K.</p> <p>Bronze Gears 24 T. 6 P. 1 1/2" F. 5/8" B.</p>

Completed 11 1/2

Martin 30 hours turning

Jones 29 " boring

Radcliff 19 " cutting

Laborer 2 1/2 "

J.B.K. Foreman

FORM 3

sub-orders distributed by the superintendent to the shop foremen. It is also frequently arranged so as to provide a record of the progress of the work from day to day.

It is not usual to include the customer's name and address on the shop order, as the job or order number is sufficient for purposes of identification.

In some businesses the shop order can follow the job through several departments until completed, but where work on the same order can progress in different departments at the same time, the various departmental costs are

assembled on the shop order from the sub-orders which preferably should be provided in different colors.

BULLOCK ELECTRIC MFG. CO.

PRODUCTION DEPARTMENT
WORKING ORDER.

Agent's Order No. 120-Cleveland

Customer's Order No. _____ Date 3/21/02 General Order No. 7569

Ship to Iron Trade Review,
Cleveland, Ohio.

Send B-L to above and Cleve. Office.

To be Completed by 5/21/02 Ship via Freight - F.O.B. Cleveland.

One (1) 25 H. P., 220 v., 470 r.p.m., Type N 168
open, shunt wound Motor.

No subbase.

No pulley.

No starting-box.

Make on this order taking parts from "D" orders.

FORM 4

For other illustrations of shop orders, see H. M. page 83, etc. The third form illustrated in this lesson possesses desirable features, indicating that the order has been carefully passed on by the responsible officials of the business

DATE Feb 22 01
FROM H R Ross
Deertown
Order Given by H R Ross
" Recd by R K S

REMARKS	
	<u>5 promised for 2nd prox.</u>
<u>25</u>	<u>2" Oil cups as made for Sta</u> <u>Western in 1899 @ 2.70 Ea. Net</u> <u>See F.O T1421</u> <u>Feb'y 1899</u> <u>R. 3791 3/11/01</u> <u>" 3793 3/16/01</u> <u>" 3845</u>

O.K. FOR MANUFACTURE

SDE
MANAGER

O.K. FOR CREDIT

S.W.S.
SECY. - TREAS.

FORM 5

before going to the shop. The first two examples provide for recording full particulars of the work, so that total cost is probably entered on them and the bills made therefrom.

(168) NO. 4. RECORD OF TRANSFERS OF MATERIAL FROM ONE MANUFACTURING DEPARTMENT TO ANOTHER.

The material, or stores, having been received in the shop, it is frequently found desirable to transfer a portion of it from one job to another. But as this material has been charged to job No. 1 in the stores ledger, a record must be

No.		Date 190	
For			
Description			
Size			
Stock		No. to Sheet	
Cover Stock		No. to Sheet	
Cuts		Electros	
Compositor's Name	Compositor's Time	Alterations	
.....	
.....	
Machine Composition			
Pressman's Name	Hrs.	Min.	
Helper's Name .....	.....	.....
Feeder's Name .....	.....	.....
Pressman's Name .....	.....	.....
Helper's Name .....	.....	.....
Feeder's Name .....	.....	.....
Pressman's Name .....	.....	.....
Helper's Name .....	.....	.....
Feeder's Name .....	.....	.....
Press No.	Press No.	Press No.	
lks.	lbs.	at	
lks.	lbs.	at	
BINDERY.			
Blinding	Pads of	Each	
Folding	Gathering .....	.....
Stitching	Trimming .....	.....
Machine Folding	Punching .....	.....
Smashing	Mailing .....	.....
Cutting	Name	Kind of Work	Hrs. Min.
.....
.....
.....
.....
.....
Total Cost - - -			
Proof to	Date		
When Wanted	Date		
Price to Customer - - -			

FORM 6. (Publishing Business.)

made of the transfer so that one job is not charged with two lots of material. The operative's cost card will only show amount of material used—the distribution of charges from stores ledger will show amount issued and transferred and also amount actually used.

A form of transfer slip will be found in the A. B. & A. E., p., 672. This should be filled out and handed in at the office where the stores ledger distribution is made.

(169) NO. 5. RECORD OF TIME EXPENDED AND MATERIAL AND STORES USED.

These records are usually provided in the form of cards, a card being given to each workman for each job on which he works, same being inspected and approved by the foreman before being sent to the office for entry on shop or sub-orders.

As stated in par. 167, it is possible in some businesses to let one cost card follow a job right through the process of manufacture, so that the one card will show complete cost of material and stores used and time occupied. This is the case in the printing and blank book manufacturing business. The (170) accompanying illustration of a cost card used by a large publishing house combines shop order, material and time record, distribution, selling price. The work goes through four distinct departments, viz., Composing Room, Press Room, Folding Room, Bindery.

BULLOCK ELECTRIC MFG. CO.	
SUB-ORDER.	
General Order <u>7569.</u>	Date <u>3/22/'02.</u>
<u>- Punch -</u> Department.	
Number of Pieces <u>- 1 -</u>	
Operation <u></u>	
<u>Front Head - C. I.</u>	
<u>D 1544.</u>	
<u></u>	
Pattern No. <u>C 1625.</u>	Drawing No. <u>4706.</u>
No. Finished <u></u>	Remarks <u>R U S H .</u>
Foreman <u></u>	
This Slip is to be signed and returned to office when work is completed.	
APPROVED.	
Estimated time <u></u> hours.	<u>W. H. W.</u>
Time taken <u></u> "	Ass't Supt.
Time saved <u></u> "	Inspector.

FORM 7.

Where different parts of a machine must be manufactured at the same time, separate cost cards are used, and the various costs afterwards assembled, as previously explained.

An excellent check on the amount of time charged on account of each workman is obtained by means of automatic clock records, full description of which

will be found in H. M. pages 142 to 149. For other examples of workmen's time cards and sub-orders, see H. M. page 87, etc. In H. M. page 83 is illustrated shop order ruled on the back for particulars of material and labor employed on the job.

Signed Y. H. B.
Order No. 7569
Machine. N/68 Type, Motor Demander
To be Completed 5-21-02
Remarks: Open - Shunt wound. No Sub-base - Pulley per St. cler.

BILL OF MATERIAL.
Date 3/22-02
Incomplete _____
Complete _____
H.P. 25 Volts 470 R.P.M.

A

Added and Changes.

Date _____

Line _____

Issued _____

Size of Arm.		Net Weight Arm.			Gross Weight Arm.			Machine Weight.		
PARTS	Material	Size or Pattern Number	Quantity or Weight	Drawing Number	Date Ord.	Date Rec'd	REMARKS	Weight	Price of Material	Cost of Material
1 Armature assembly				6055						
2 Bolts-machine										
3 " - set										
4 Cap screws										
5 " "										
6 Head, front	C.I.	C 1625	1	4706	D 1344					
7 " rear and coil sup.		C 2466	1	6147	D 1271					
8 Keys-commutator		On Shaft								
9 " - punching										
10 " - spider										
11 " - pulley	C.I.	2 1/2 x 3 1/2	1	0055	m S. H. H.					
12 Nuts										
13 " "										
14 Oil guard										
15 " wrench										
16 Pins										
17 Punchings	#2 Steel	5 1/2 x 1 1/2	530	6548	m S. H. H.					
18 " and										
19 " ventilating			6							
20 " slot		5 1/2 x 1 1/2	37	4449						
21 Ring-split										
22 Screws-machine										
23 " - set										
24 Shaft	N S	1 1/2 x 60 f		6055	D 1444		Complete with Keys-Nut & Oil-guards			
25 Spider										
26 " wings										
27 Washers										
28 " lock										
29										
30										
31										
32										
33 Commutator assembly				4749						
34 Cap screws										
35 Lock washers										
36 Mica			used							
37 Micronite										
38 Nuts	Shell Complete		1	4014	D 1532					
39 Ring										
40 Segments	Copper Sec 58	111	7359	3/2			Length 5 1/2"			
41 " "										
42 Segment necks										
43										
44										

ORDER NO. 7569-1

(171) Form No. 7 is a sub-order for a part of an electric motor, only the workman's time being recorded thereon.

(172) Form No. 8. In this case a bill of the necessary material is prepared from established specifications and special drawing, showing parts required and quantity and cost of material to be used.

(173) Forms No. 9, 10, and 11, 12, 13. We attach three forms of time records. The first is interesting, being on the coupon plan, and appears to be quite convenient.

MAN NO.		DEPARTMENT		DATE	
Name					
Ordinary Time					
Overtime					
Total					
FOREMAN'S APPROVAL					
ORDER NO.	STARTED.		HOURS		VALUE.
	FINISHED.				
ORDER NO.	STARTED.		HOURS		VALUE.
	FINISHED.				
ORDER NO.	STARTED.		HOURS		VALUE.
	FINISHED.				
ORDER NO.	STARTED.		HOURS		VALUE.
	FINISHED.				
ORDER NO.	STARTED.		HOURS		VALUE.
	FINISHED.				

THE IRON TRADE REVIEW

FORM 9

Name <u>Joe Johnson</u> Date <u>August 1-1904.</u>																											
Use top column for number of jobs only.																											
106													Total														
Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Hrs.	$\frac{1}{4}$	$\frac{1}{2}$	Total
9													9														
Outside Work.																											
Who For				Description of Work				Material Used																			
Eureka Mfg Co.				Lathe				—																			
Total Hours														9													

FORM 10.

ROSSMAN & BRACKEN CO., 132 East Forty-second Street, New York.

Time Sheet of Jamie A. Burns and H. Lambinger Helper for week ending Oct 4 1901
Approved by _____

Approved by

WRITE DOWN MINUTELY THE DESCRIPTION OF WORK DONE EACH DAY, WHAT FLOOR OF BUILDING, AND WHAT PIECE OF WORK ENGAGED ON

WRITE DOWN MINUTES THE DESCRIPTION OF WORK DONE EACH DAY, WHAT FLOOR AND OR WHAT PART OF BUILDING WAS BUILT										WHAT PIECE OF WORK COMPLETED					
	DATE	STATE REPLICITY OR WHAT FLOOR AND OR WHAT PART OF BUILDING WAS BUILT	SAVING TIME	WORK COMPLETED	DESIGN TIME IN HOUR	CONCRETE TIME IN HOUR	BRICK LAYING TIME IN HOUR	OTHER WORK DONE	EXPENSES						
SATURDAY	26 th 5.00.00	Testing Carotons				4	4 1/2								
MONDAY	"	"				8	8 1/2								
TUESDAY	"	Setting Soil Lines				8	8 1/2								
WEDNESDAY	"	Correcting soil lines in cutting with removing benches set to street				8	5 1/2								
THURSDAY	"	Roughing traps for manholes				8	8 1/2								
FRIDAY	"	"				8	8 1/2								

48 hours constitutes a week's work for workmen, and 51 hours for helpers, which ends Friday night. This slip must reach the shop Friday evening, fully made up, otherwise no wages will be paid.

FORM 11.

For Job No. _____ Daily Work Card.		Date _____ 190__
Owners Name _____		
What sort of job is it? _____		
When is job to be completed? _____		
Where Shipped to? _____		
_____ hrs. Lathe Work if. _____ hrs. Planer Work if. _____ hrs. Vise Work if. _____ hrs. Drill Press if. _____ hrs. Wheel Press if. _____ hrs. Pipe Fitter if.	_____ hrs. Blacksmith and Helper if. _____ hrs. Carpenter of _____ hrs. Fitter if. _____ hrs. Boring Bar if. _____ hrs. Milling Machine if. _____ hrs. Pattern Maker if.	
Also charge this job with the following material used to-day:		
_____ lbs. Castings @ c. _____ lbs. Refined Iron @ c. _____ lbs. Cast Washers @ c. _____ lbs. Threaded Nuts @ c. _____ feet Pipe Lumber @ f.x. _____ bolts @ _____ bolts @	_____ lbs. Brass Castings @ cf. _____ lbs. Swede Iron @ η _____ lbs. Cut Washers @ i _____ lbs. Babbitt Metal @ oi _____ feet Oak Lumber @ ofx. _____ bolts @ _____ bolts @	
Miscellaneous supplies used on this job to-day. _____		
Job Number _____		Superintendent _____

FORM 12.

TIME-CARD.

No. _____	Order _____
Date _____	Name _____
Supervising _____ Mrs.	Gigs. _____ Mrs.
Draw and Pay _____	Machinery Repair _____
Shop Work _____	Defective Work _____
Shipping Room _____	Repair Orders _____
Amount _____	

Use separate bills for each Order Number and for each class of Work.

FORM 13.

(175) Unproductive labor must be carefully watched and recorded, as all productive work should bear a proportion of the cost, as will be explained later.

(176) NO. 6. RECORD OF TOTAL COST, ETC.

Having satisfactorily devised our system of recording the exact amount of time expended and material used on the articles manufactured, it is a comparatively simple matter to assemble our total costs prior to computing the percentage of manufacturing expense which must be added to make the factory records complete.

H. M. p. 80 shows a form of summary exhibiting total cost of completed orders.

COST CARD FOR THE BOOT and SHOE MANUFACTURING BUSINESS.

Order No. _____ Date Wanted. _____ Date Completed. _____

Description—Men's pat. tip, vamp Dongola.
top cr'c Kid.

Size—2/6's, 2/7's, 4/8's, 4/9's.

Stock used :—Uppers.....14 lbs. at 20c
Bottom.....22 lbs. at 10c
Findings.....

Labor—

Cutter.....	hrs.	min.
Fitting.....		
Lasting.....		
Stocker.....		
Trimmer.....		
Finisher.....		
Packer.....		
Factory exp.....		

Total direct cost.....

Form No. 14 also illustrates the assembling of all costs of a special job, the cost of each operation being first separately ascertained.

COST RECORD SUMMARY									
Name _____	Article _____	Date Begun _____		Order No. _____		Date Finished _____			
Particulars	Hours	Rate	Material	Labor	Fact. Expense	Rd. Freight	Charges	Total	
Draughting									
Pattern Maker									
Foundry									
Forge									
Forge Helper									
Machinist									
Machine Shop Labor									
Carpenter									
Carpenter Shop Labor									
Painter									
Yard Labor and Shipping									
Boiler Shop									
Sewing									
Perforating									
Piece Work—Machinist									
Carpenter									
Rounds Castings									
Prepaid Charges									
Stores									
Purchases									
Manufactured Stock									
Total									

FORM 14.

Form No. 15 illustrates a cost summary used for factories belonging to class 2.

(176a) Cost summaries are sometimes arranged in book form, the particulars being copied from the shop orders with diffused expense added. A very

useful plan in this connection is to show on the opposite page particulars of estimate for purposes of comparison, as per appended illustration. (See Forms 16 and 17.)

Working Sheet		Adrian Carriage and Wagon Co.	
Date _____ 190__		Job No. _____	
Commenced _____		Finished _____	
Quantity _____		Design No. _____	
Description of Work _____			
		Wanted by _____	
Name of Workman	S	M	T
	W	T	F
	Total	Time	Rate
Materials Used.			
Lumber			
Hardware			
Finishing Materials			
Prime Cost			\$
Add 31 2/3 % on Labor			
Gross Cost			
Add 33 1/3 % on Gross Cost for Profit			
Selling Price			

FORM 15.

[illegible]

FORM 16.

[illegible]

FORM 17.

A writer on the subject of the diffusion of unproductive labor and factory expense says:

"There are many different methods, but they all belong to one or other of three classes:

(1) By a percentage on direct or productive labor, based on past or current records.

This is the method in most general use in Great Britain, although owing to its overburdening highly-paid skilled labor and underburdening cheap, unskilled labor, it gives in many cases far from reliable results. This disability may be somewhat minimized by adopting a different percentage for each class of work.

(2) By an hour rate based on the average number of hours direct or productive labor.

This is the method usually adopted, and except in shops where there is a great diversity in the size and cost of individual tools, it will be found to give very reliable results, the loss incurred on cheap labor, as in the "percentage method," not having to be made good at the expense of work requiring dearer labor but less time. Some accountants and managers recommend that this rate should be recalculated every month, but this will generally be found to give more trouble than it is worth. Probably the best method of varying this rate is by a sliding scale based on the average number of men in productive work. This plan is used in several shops, the foreman's time stamp being utilized to stamp the job cards with the number of men in productive work each day.

(3) By a machine hour rate, supplemented by an overhead hour rate for those charges, which it is impossible to allocate to the machines."

We are strongly of the opinion that the only equitable plan is to pro-rate expense on the basis of wages paid. This percentage is obtained by taking total actual hour rate of workmen as a basis to determine percentage equivalent to actual hour rate of foreman and non-productive labor, the percentage changing as does conditions in the shop. Percentage for shop expense is arrived at by using total labor expense of shop for previous month as basis to determine per cent of an average actual repair and incidental expense for the previous three months. This manner of arriving at shop expense has proven to be as nearly accurate as can be obtained, having balanced with actual repairs and incidental expenses for the year within ten dollars. Further attention will be devoted to this subject in subsequent lessons.

See H. M. pages 116 and 127, which explains that no invariable basis can be depended upon to suit every business condition.

(179) FACTORY ACCOUNTS WITH MAIN OFFICE AND MAIN OFFICE ACCOUNTS
WITH FACTORY.

Factory will credit main office with raw material and expenditures on account of productive and unproductive labor, light, heat, power, repairs, shop expense, etc., and will debit main office with total cost of manufactured stock. Main office will reverse these entries. In making up the figures for any fiscal period main office will show on its books a debit to manufactured stock received from factory, and a debit to factory for inventory of material on hand and value of uncompleted orders.

The total debits to manufacturing account should agree with total debits to Manufactured Material account plus inventory of unfinished jobs and store-room inventory. Or we may illustrate this point as follows:

MANUFACTURING ACCOUNT.

DR.	CR.
Purchases.	Completed goods.
Labor.	Unfinished work.
Shop Exp.	Inventory.

The method of factory keeping account with main office in a large manufacturing concern with several factories located in different cities is thus explained:

"To illustrate this method and at the same time give as lucid an explanation as possible will say we use columnar sales and purchase records and similar records for our sales and purchase returns. These forms are made out in duplicate on a billing machine; one copy is retained at the works and the other sent to the main office. At the end of each month a recapitulation is made up from the various sheets and journal vouchers made out charging Stores, Contracts, Foundry Stores, and respective factory expense accounts with the totals and crediting same to Main Office. A voucher is also passed through the Voucher record at the end of each month for the works pay roll, which is posted in the main office to the

Thompson-Webb Company.		File No. _____																						
Purchase Voucher	No. G. _____ In Favor of _____	Cr. Ledger \$ _____ Inter-Works _____																						
Name _____	Address _____																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">PURCHASING DEPARTMENT</th> <th style="width: 50%;">COST DEPARTMENT</th> </tr> <tr> <td> Date of Invoice _____ Invoice Received _____ Checked by _____ Requisition No. _____ P. A. No. _____ Terms _____ F. O. D. _____ Prices Correct _____ <i>General Merchandise Dept.</i> </td> <td> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Charge To</th> <th>Amount</th> </tr> <tr><td>Stores</td><td>\$ _____</td></tr> <tr><td>Contract</td><td>_____</td></tr> <tr><td>Manufactured Stock</td><td>_____</td></tr> <tr><td>General Expenses</td><td>_____</td></tr> <tr><td>General Supplies</td><td>_____</td></tr> <tr><td>Stationery and Printing</td><td>_____</td></tr> <tr><td>Foundry Stores</td><td>_____</td></tr> <tr><td>Total</td><td>\$ _____</td></tr> </table> </td> </tr> </table>			PURCHASING DEPARTMENT	COST DEPARTMENT	Date of Invoice _____ Invoice Received _____ Checked by _____ Requisition No. _____ P. A. No. _____ Terms _____ F. O. D. _____ Prices Correct _____ <i>General Merchandise Dept.</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Charge To</th> <th>Amount</th> </tr> <tr><td>Stores</td><td>\$ _____</td></tr> <tr><td>Contract</td><td>_____</td></tr> <tr><td>Manufactured Stock</td><td>_____</td></tr> <tr><td>General Expenses</td><td>_____</td></tr> <tr><td>General Supplies</td><td>_____</td></tr> <tr><td>Stationery and Printing</td><td>_____</td></tr> <tr><td>Foundry Stores</td><td>_____</td></tr> <tr><td>Total</td><td>\$ _____</td></tr> </table>	Charge To	Amount	Stores	\$ _____	Contract	_____	Manufactured Stock	_____	General Expenses	_____	General Supplies	_____	Stationery and Printing	_____	Foundry Stores	_____	Total	\$ _____
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Date entered on Factory Purchase Book _____ Filed _____ Date Payable _____ Checked _____ Invoice Examined and Extra Invoice Number checked _____ NOTE: All head office charges and invoices from other plants are to be shown as INTER-WORKS																								
Comptroller's Department		Voucher Record Correct _____ <i>Factory Accounts</i>																						
		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> If Discounted Stamp Here </div>																						

credit of Works Pay Roll account which balances said account; as the main office reimburses the works each week for wages paid and charges same to this Pay Roll account.

The factory ledger carries an account called "Head Office," and we will presume that the columns headed "Contracts" on the voucher record amounted in total to \$50000; pass a journal voucher as follows:

	Dr.	Cr.
Contracts Underway	\$50,000 00	
Material... ..	\$40,000 00	
Labor.... .	5,000 00	
Factory expense account.....	5,000 00	
Head Office		\$50,000 00

EXPLANATION—

To transfer total charges for the month as per voucher record.

Similar entries are made as to all the other accounts on purchase voucher record. The reverse entries to above would of course be made for the purchase returns record.

Another account is also carried on factory ledger entitled "Head Office, Sales account," which is used in similar manner to the purchase record, a journal voucher being passed as follows:

	Dr.	Cr.
Head Office "Sales" account	\$60,000.00	
Contracts Under Way		\$60,000.00
Material	\$50,000.00	
Labor	5,000.00	
Factory Expense account	4,500.00	
P. P. Frt.	500.00	

EXPLANATION—

To transfer total cost of sales billed, etc., for the month as per Sales Record.

Customers' returns are treated in a similar manner, charges being made at the end of each month, the proper representative account in ledger and credit going to head office, "Sales account."

This method keeps the sales and purchase accounts separate, the net difference between the two accounts being at all times in agreement with the head office general ledger account with factory.

(180) TOOLS.

Tools account will be debited with the value of all tools made or purchased and credited with the amounts written off from time to time for depreciation and the value of discarded tools at the time they are discarded.

A card showing name of tool, size, location, value, additions, depreciation, etc., should be made out for each different kind of tool. Tools discarded should be reported to office immediately. Tools discarded before being entirely depreciated should be charged to Tools Expense account and credited to Tools account with just the amount of their present worth. Care should be exercised to include depreciation and the items in Tools Expense account in factory expenses when pro-rating these expenses.

(181)

REPAIRS.

Where considerable repairing is done, it is desirable to make this a distinct department, using different colored order blanks and shop orders. In large businesses, such as in the manufacture of wagons, the order number is entered in the Customers' Ledger account, so that when a part is returned for repair, or duplicate parts ordered, it is a very easy matter to ascertain exactly what is required.

(182)

A SYSTEM OF NOMENCLATURE FOR MACHINERY.

Make the first two letters the initials of the general name of the machine and the last letter one of an alphabetical series which will represent the sizes of the machine. An example of this is "P. P. D.-I," which is the symbol for Power Press No. 4 frame. If there is any chance of a future smaller or intermediate size gaps should be left in the alphabetical order. No two machine names should be alike and no two-piece names alike in the same machine.

Use symbol book in which to record machines which have arrived at such a state of perfection as to be marked "standard." Piece numbers are recorded in first column. Column headed "same as" means that the piece is identical with a piece belonging to some other machine and can be manufactured with it. The quantity column tells the number of pieces of a kind required. The piece numbers are gapped after each kind of material and also at end of groups. This is to allow for future changes and additional pieces, also that other nearly similar machines having more pieces may have same piece numbers.

If a standard P. P. D.-I has been altered, use a small letter after the symbol (P. P. D.-Ia), showing that the piece is obsolete. Thus duplicate pieces of old style machines can be supplied to customers.

(183)

MACHINE PRODUCTION.

A record should also be kept of machine production, so that it can be ascertained that the workmen in charge have performed their duties satisfactorily, and have obtained the necessary results from each machine by devoting to their work the required attention.

(184)

POWER PLANT.

The power plant is treated as a separate shop, and the wages, depreciation, fuel, water, stores, and expenses are charged directly against the shop account and represent the cost of the power furnished.

The power is used to operate the machines in the different shops, and to furnish electric lights and steam heat. The electricity used in each shop or department for lights can be estimated by number of lights per hour used, or measured; the steam for heating each department can be determined by measuring the water condensed or by proportion of space heated. The horse power equivalent can easily be calculated.

The power required to operate the different machines can be determined by the use of instruments or by estimates of the engineering or mechanical department. The power rate per hour by the hours in operation would give the machine burden for the day, and the daily machine reports would contain this information. The shop summaries, together with the calculated burden for light and heat would give basis upon which the distribution of cost of power would be made.

The results of the distribution are charged directly to the shops or departments using the power and by this method light and heat can be charged directly to the shops and departments.

(185)

GENERAL PLANT AND EQUIPMENT.

A record of the plant and equipment of a factory can be most conveniently kept on a card system, a card account being kept with each machine and building, and with each item or class of equipment. The ledger should be divided into sections, such as plant, machinery and tools, and furniture and fittings. Each section, if desired, can be sub-divided so as to show the different shops and departments in which the items are carried. A controlling account will enable the ledger to be balanced, and a card carrying the total accounts of each shop or department will facilitate auditing and provide information for statements without the necessity of listing all the card accounts.

Each account should show the original cost, and particulars as to description, date acquired, cost of installing, and any added cost. It should also show reserves set aside and costs of repairs and replacements.

(186) We illustrate a form of chart showing total output of month, sales, cost of sales, and net revenue, which may convey some useful ideas in regard to the assembling and use of statistics.

CHART	Material		Labor		Genl Expense		Repairs		Manufacture		Mfg. Goods		Sales		Sales Expense		Revenue	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Inventories	Invoice										Invoice		Mfg. Goods					Trade Repairs
Purchases	Pur.						Mat.		Material									Trade Sales
Labor			Labor				Labor		Labor									Sundry
General Expense					Exp.		Exp.		Exp.									
Selling Expense															Exp.			
Rent					Rent													
Insurance					Ins.													
Interest																	Int.	
Discount and Allowance	In Disc. + Al.																	
" " Out													Disc + Allo.					
Frt. and Drayage In			Frt. + Dray.															
" " Out															Frt. + Dray.			
Closing		Invoice Acct. Rec.		Repairs Exp.		Repairs Mfg. Acct. Rec.		Trading Acct. Rec.		Mfg. Goods Cost		Sales Cost Invoice		Trading Acct. Rec.		Trading Acct. Rec.	Net Sales	Gain

FORM 19.

EXERCISE.

1. Explain the principles governing the organization of a Cost System for a manufacturing business, which purchases one kind of raw material and manufactures therefrom by machinery seven grades of product, four distinct operations in different workshops being necessary to produce the completed article.

2. Exemplify general methods for:

a. Keeping account of stock received and its disposition. Draw suitable form of stock record.

b. Keeping account of material and labor occupied in manufacture and efficient check on accuracy of same. Submit sketches of shop order, and record of time and material used in process of manufacture.

c. Cost Record of articles manufactured, and submit illustration of cost summary.

d. Treatment of partially completed articles for inventory purposes.

These explanations and illustrations must be strictly original in order to secure full marks.

3. Would a merchandise account ever be found desirable or necessary in a manufacturing business? Accompany answer by example.

(186a)

TABLES FOR USE IN CONNECTION WITH DEPRECIATIONS. ANNUAL AMOUNTS TO BE EARNED, INCLUSIVE OF INTEREST ON INVESTMENT.

AM'TS.		YEARS.									
	1	2	3	4	5	6	7	8	9	10	
\$ 25.00	\$ 26.50	\$ 13.63	\$ 9.22	\$ 7.19	\$ 5.90	\$ 5.04	\$ 4.43	\$ 3.97	\$ 3.60	\$ 3.33	
50.00	53.00	27.25	18.43	14.38	11.80	10.08	8.86	7.94	7.22	6.65	
100.00	106.00	54.50	36.86	28.75	23.60	20.16	17.71	15.93	14.46	13.30	
200.00	212.00	109.00	74.66	57.50	47.20	40.32	35.42	31.75	28.89	26.60	
300.00	318.00	163.50	112.00	86.25	70.80	60.50	53.13	47.61	43.33	39.90	
400.00	424.00	218.00	149.33	115.00	94.40	80.64	70.84	63.50	57.78	53.20	
500.00	530.00	272.50	186.66	143.75	118.00	100.80	88.55	79.35	72.21	66.50	
600.00	636.00	327.00	224.00	172.50	141.60	121.00	106.26	95.25	86.66	79.80	
700.00	742.00	381.50	261.00	201.25	165.20	141.12	124.00	111.12	101.11	93.10	
800.00	848.00	436.00	294.88	230.00	188.80	161.66	141.68	127.00	115.54	106.40	
900.00	954.00	490.50	336.00	258.75	212.40	181.50	159.39	142.83	130.00	119.70	
1000.00	1060.00	545.00	373.00	287.50	236.00	201.60	177.10	158.75	144.44	133.00	
1100.00	1166.00	599.50	410.00	316.25	259.60	221.76	194.81	174.62	158.89	146.30	
1200.00	1272.00	654.00	448.00	345.00	283.20	242.00	212.58	190.50	173.33	159.60	
1300.00	1378.00	708.50	485.00	373.75	306.80	261.83	230.28	206.37	187.78	172.99	
1400.00	1484.00	763.00	522.00	402.50	330.40	282.24	248.00	222.25	202.22	186.20	
1500.00	1590.00	817.50	560.00	431.25	354.00	302.50	265.72	238.12	216.69	199.50	

AM'TS.		YEARS.									
	11	12	13	14	15	16	17	18	19	20	
\$ 25.00	\$ 3.09	\$ 2.89	\$ 2.74	\$ 2.59	\$ 2.45	\$ 2.34	\$ 2.25	\$ 2.17	\$ 2.09	\$ 2.03	
50.00	6.17	5.78	5.47	5.20	4.93	4.68	4.50	4.33	4.18	4.08	
100.00	12.36	11.58	10.93	10.38	9.86	9.36	9.00	8.65	8.35	8.13	
200.00	24.73	23.16	21.85	20.72	19.73	18.72	18.00	17.30	16.70	16.30	
300.00	37.09	34.75	32.78	31.07	29.60	28.08	27.00	25.95	25.05	24.45	
400.00	49.46	46.33	43.71	41.39	39.46	37.44	36.00	34.60	33.40	32.60	
500.00	61.82	57.91	54.62	51.78	49.33	46.80	45.00	43.25	41.75	40.75	
600.00	74.18	69.50	65.53	62.74	59.24	56.16	54.00	51.90	50.10	48.90	
700.00	86.39	81.15	76.47	72.50	69.06	65.52	63.00	60.55	58.45	57.05	
800.00	98.91	92.66	87.39	82.87	78.93	74.88	72.00	69.20	66.80	65.20	
900.00	111.28	104.25	98.32	93.22	88.80	84.24	81.00	77.85	75.15	73.25	
1000.00	123.65	115.84	109.21	103.51	98.64	93.60	90.00	86.50	83.50	81.50	
1100.00	136.00	127.41	120.17	113.92	108.53	102.96	99.00	95.15	91.85	89.65	
1200.00	148.30	139.00	131.10	124.28	118.40	112.32	108.00	103.80	100.20	97.80	
1300.00	160.73	150.58	142.00	134.71	128.26	121.68	117.00	112.45	108.55	105.95	
1400.00	173.09	162.16	152.93	145.00	138.15	131.04	126.00	121.10	116.90	114.10	
1500.00	185.46	173.75	163.85	155.36	148.00	141.40	135.00	129.75	125.25	122.25	

This chart shows the annual depreciation for a period of twenty years on machinery valued from \$25.00 to \$1,500.00. Any value in excess of this may be found by adding the proper amounts.

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- 159. Classification of Factories.
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NOTICE.

Subscribers will please be careful to write their names and addresses on answers to exercises sent in.

In cases where this is not done we cannot identify the senders.

INSTALLMENT VIII

The Devising of Special Systems of Accounts
and Cost Accounting

The Devising of Special Systems of Accounts

Text Books referred to:

American Business and Accounting Encyclopædia—(A. B. & A. E.)

Thorne's 20th Century Book-Keeping and Business Manual—(Th. M.)

In organizing special systems for particular kinds of businesses it is important that all books of account should be arranged to make a harmonious whole. With this end in view the accountant should make a tour of the entire establishment for which the system is to be devised, making notes of every detail of methods currently employed, the relation of each book to the other, the origin of all entries, and the objections or imperfections found by those who have the work in charge. Having accomplished this work with fidelity and exact attention to detail, an intelligent comprehension of the problems to be solved must necessarily follow.

A system of accounting suitable to the requirements of a business is of the first importance to its general welfare and future prosperity, such a system not only saving unnecessary labor and expense and providing safeguards against dishonesty, but presenting a history of the transactions of the business that will throw a clear and intelligent light on the sources of revenue, and enable the manager to observe without impediment the revolutions of the machinery of the business, and to judge of its efficiency or remedy its defects.

The capacity to prepare suitable comparative financial and trading statements is also a valuable asset to the book-keeper. Examples of this class of exhibits may be found in Th. M., paragraphs 69, 153, 230, 319, 432, 448, 450, 451, 454, 455 and 507.

Examples of methods and forms arranged to meet special requirements may also be found in Th. M. under the departments headed "Special Pointers for Book-keepers," and "Accounting Systems Devised for Various Businesses."

PRINTING AND PUBLISHING BUSINESS.

It must be specially borne in mind by the accountant that it is his duty to note what information is chiefly required in the management of the business and to facilitate its accumulation. Thus in a printing and publishing business there may be a daily publication, two weekly publications, advertising records to be kept of all three, and regular job printing.

(188) We will require, therefore, subscription records, advertising records, production records, job printing trading accounts. Right at the outset we are confronted with a great difficulty in this business, viz., how to apply a

check on subscription (189) receipts. A healthy magazine with a circulation of about 100,000 copies means a very heavy mail with large numbers of small remittances in checks, money orders and currency. Some trusted employe is usually deputed to open this mail, but what check can be applied to prove that every dollar has been accounted for? The work might be entrusted to two employes, but then they might be in collusion.

In considering a plan of check we will suppose that where speculation is going on it would be impossible for the culprits to "fix up" the subscription cards until after a comparison could be made. Numerous complaints from subscribers would undoubtedly lead to a change in the personnel of the mail opening department. It is a complicated question and we have included it in the exercises appended to this installment.

The record of cash subscriptions is obtained by providing special columns in the cash book for each publication.

(190) Advertising is usually paid for on publication, and a combination card, charge book and ledger is extremely convenient and satisfactory for this kind of record. There should be a separate advertising ledger for each

½	½	1	1½	2	2½	3	4	5	6	7	8	10	12	14	16	18	20	22
From	Space	Position	Times	Rate	Am't	B-k Page	Charge to	Pstg Chk	Date	Credits	Bal'nce	Remarks						

publication, and a separate column in cash book and journal on both sides for each advertising ledger, so that the work on each ledger can be individually proved.

Separate columns must also be provided for the job printing department, for which regular sales or charge tickets may be used.

The figures at the head of the card show the number of inches called for by the advertisement and are very useful in the "make-up" of the magazine or newspaper, and in calculating amount of advertising space for which it is necessary to provide.

This completes the record of revenue receipts and expenditures. Where the business is so voluminous as to necessitate the employment of both cashier and book-keeper separate cash book and journal should be provided. Where one man combines both duties a combined cash journal will be found convenient.

(191) We attach example of a form of journal used in a business of the kind described, which becomes a cash-journal by providing columns for cash receipts and expenditures.

DEBITS																
Gen'l. Expenses	Com on Subs			Adv'g Com	Productive Cost						Adv'g Ledgers			Job Print'g Ledger	Gen'l. Ledger	Folio
	News	Times	Post		Paper	Comp	Press	Bindg	Contrib	Buttons	Deliv	Printg Dept	News	Times	Post	

CREDITS												
Names	Date	Folio	Gen'l. Ledger	Adv Ledgers			Subscriptions			Job Printg Dept	Post	Times
				Post	Times	News	Post	Times	News			

On the debit side a distribution of "Productive Cost" columns will give a comparative record of cost of each paper. Separate productive cost columns for each publication would make too wide and unwieldy a book, and a special distribution book would probably be found more convenient. The value of these comparative cost columns does not need emphasizing.

(192) The Trading Account for each publication would consist of the following items:

DEBITS.					CREDITS.				
Paper					Subscriptions				
Composition					less com.				
Press Work (inc. ink)					Advertising				
Binding					less com.				
Contributions									
Delivery.									

On the credit side the three columns headed for the respective publications are intended to be used for allowances and gross entries.

WHOLESALE AND RETAIL BICYCLE BUSINESS.

(193) A wholesale and retail bicycle business, with repair department attached, forms quite an instructive study. Second-hand wheels are purchased and exchanged; there are both time, lease, and cash sales; and the wholesale and retail departments must be kept distinct.

Starting with purchases, they are charged to "Cycle account" and credited to Purchase Ledger.

Second-hand wheels purchased or exchanged are charged to "Second-hand Cycle account."

The numerous bicycle sundries—saddles, bells, lamps, etc., etc., are charged to "Bicycle sundries account."

Supplies purchased for the repair department are charged to "Repair Dep't account."

"Parts" are sprocket wheels, etc., and are also charged to a separate account.

A recapitulation of the purchases is made each day and the totals debited to the various accounts to which distribution must be made.

Cash sales are recorded on a regular cash register, which effects its own distribution. The totals are entered on the cash book at the close of each day.

[illegible]

A recapitulation is made each day from these sales tickets, and the totals credited to the various accounts.

[illegible]

(196) The cost of repairs is debited to "supplies" or "parts" from this tag. Four ledgers are used (all proved separately), viz. : Wholesale Ledger,

[illegible]

Retail Ledger, Lease Ledger, General Ledger, columns being provided for same on both sides of cash and journal. Special columns are also provided in the cash book for record of daily receipts from the cash register.

(197) In the business above described an excellent form of journal voucher is used and is herewith reproduced:

ADJUSTING ENTRY OR JOURNAL VOUCHER.							Folio
Authority	Debit.....	Ledger					Date Billed
						
	.....Credit.....						Date of C. M.
						
Quantity							

LAKE TRANSPORTATION BUSINESS.

(198) If we consider the lake steamboat traffic, freight forwarded, and claims on foreign companies for proportion of claims for loss and damage, overcharges, etc., are important features to be provided for.

As there are numerous complications in connection with these departments of the business we find very elaborate records devised to take care of them.

(199) The Freight Forwarded Journal is ruled for the four steamboats

DR.

Freight Forwarded

Agency		Distribution				Miscellaneous		Wabash R.R.		From Whom Recd	Consignee	Destination
Totl Collect	Stmr	Stmr	Stmr	Stmr	Totl Recd	Totl Expd	Totl Recd	Totl Expd				
											Am't bot fond	

From

Station during Month of 1900 CR

Date	Trip No	Manifest	Weight	Bu Grain	Transfer		Distribution		Stmr	Stmr	Stmr	Stmr	Appy. Piped Top
					Date	Nc	Wab. R.R. Back Chg.	Misc. Back Chg.					

owned by the steamship company, and the totals of the columns are posted to the ledger at the end of each month.

(200) An examination of the "Record of Claims Audited" book will show that a certain amount of space is allotted to each trip of each steamer, suggesting the desirability of using the loose leaf method in order to secure the very best results.

[illegible][illegible]

Handling freight	Repairs to machinery
Handling grain	Tug bills
Wages of crew	Grain shortage
Fuel	Cooperage
Groceries	Cargo insurance
Supplies	Sundries
Repairs to steamer	

Salaries	Printing
Rent	Sundries
Postage	

EARNINGS AND EXPENSES

Month of 190.. as compared with 190..

	190..		190..		INCREASE OR DECREASE	
	Tons	Revenue	Tons	Revenue	Tons	Revenue
EARNINGS.						
Steamer						
..						
..						
..						
Miscellaneous Receipts,						
Commissions,						
Total Receipts,						
EXPENSES.						
Steamer						
..						
..						
..						
General Expenses						
Cleveland Agency,						
Buffalo Agency,						
Interest						
Interest						
Insurance,						
Overcharges,						
Total Expenses,						
Surplus or Deficit,						
Red Ink denotes Decrease or Deficit.						

EARNINGS AND EXPENSES

Season April 1st, 190.. to.....190.. as compared with same period last year.

	April 1, 190..to.....190..		April 1, 190..to.....190..		INCREASE OR DECREASE	
	Tons	Revenue	Tons	Revenue	Tons	Revenue
EARNINGS.						
Steamer						
"						
"						
Miscellaneous Receipts,						
Commissions,						
Total Receipts,						
EXPENSES.						
Steamer						
"						
"						
"						
General Expenses						
Cleveland Agency,						
Buffalo Agency,						
Interest						
Interest						
Insurance,						
Overcharges,						
Total Expenses,						
Surplus or Deficit,						
Red Ink denotes Decrease or Deficit.						

Dr. GENERAL BALANCE SHEET,

to..... 190.. Cr.

<p>To Cost of Lake Steamers, etc. " Due from Foreign Roads (Bills Collectible) " Due from Agents, " Cash in First National Bank, " Cash in Bank of North America, " Cash on Hand (Petty Cash), " Supplies in Store,</p>	<p>By Capital Stock, " Mortgage Bonds, " Interest on Bonds, " Accounts Payable (Vouchers), " Bills Payable,</p>
---	---

(203)

GAS AND ELECTRIC LIGHT BUSINESS.

We attach illustration of the Cash Received Book of a Gas & Electric Light and Fuel Co. It will be observed from this illustration that the product of the company is divided into eight departments. The receipts are entered up in the Cash Received book from the stub of the receipts given to customers :

CASH RECEIVED BOOK

THE HUNTINGTON LIGHT AND FUEL COMPANY

[illegible]

(204) The cost and revenue derived from installation and repairs, etc., is very comprehensively summarized on the record here shown, furnishing a complete history of each order received, the details of cost of material, time, and labor, and the profit made or loss incurred on each order, together with a comparative exhibit of labor per foot of pipe connected.

Up-to-date methods of arranging books for gas, or electric light company's accounts will be found discussed at length in A. B. & A. E., p. 625, etc.

[illegible]

Gas Appliances																		
Class and Quality of Work										Material Costs								
Appliance to Clean	Appliance to Repair	Tubing install	Cock install	Hot Plate install	Small Appliance install	Radiator install	Gas Log install	Gas Fire install	Furnace install	Water Heater install	Range install	Feet of Pipe Total	Cost of Pipe	Cost of Fittings	Cost of Appliance	Cost of other Material	Total Cost of Material	Order Number
		1	1			1					1	8	.24	.20	18.25		18.69	

MINERAL WATER BUSINESS.

In further illustration of special forms devised in order to effect various ends in different businesses, we now present a form of customers' ledger in the mineral water business.

[illegible]

(206) As in breweries, the packages are valuable and have to be either returned or paid for by the customers. It is, therefore, considered desirable

[illegible]

Posting is made from a record of deliveries, sometimes direct from driver's record, and sometimes from a separate record copied from the driver's reports. This latter method is not to be encouraged as involving a duplication of work to be avoided whenever possible.

WHOLESALE DRUG BUSINESS.

[illegible][illegible]

The total of left hand page is credited to accounts payable account, and the totals of right hand page are debited to the various departments.

	Salesman							
Profit	Debt:	Sale	Sold to _____					
\$	Drugs and Chemicals	\$	Address _____					
\$	Druggists Sundries	\$	Terms ____ Days or ____ percent discount for cash in ten days.					
\$	Alcohol	\$						
\$	Laboratory	\$						
	Total							
Profit	Shippers Check	Quantity	Description	Discount	Price	Extension	Total	
			Order Sheet Bill and Charge The order sheet to source and charge sheet for Bookkeeper all made or one writing. Order sheet used by Terminals for receipt of goods by customer being delivered.					
			Received above goods.					

[illegible]

(211) We also show form of cashier's daily report to manager.

Cashier's Daily Report 190—				Daily Sales Report.			
Balance in Bank last report		Bank of Chicago		Drug Department.		190—	
Cash Receipts		\$ _____		190		19	
Accts Receivable		_____		City		\$ _____ \$ _____	
Bills		_____		Country		_____	
Interest		_____		Cash		_____	
Cash Sales		_____		Total		_____	
Sundries		_____		Number orders received _____			
Deposited		\$ _____		" " Shipped _____			
Cash Disbursements.		\$ _____		Journal Debit posting \$ _____			
Accounts Payable		_____		Check Register _____			
Sundries		_____		Journal Credit posting _____			
Bills Payable		(_____)		Claim _____			
Drawn		\$ _____					
Balance		\$ _____					
Total Bank Balance		\$ _____					
		Cashier.					

INDEX.

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|---|---|
| 188. Printing and Publishing Business.
189. Subscription Receipts.
190. Advertising Records.
191. Cash Journal.
192. Trading Account.
193. Bicycle Business.
194. Department Sales Ticket.
195. Department Lease Ticket.
196. Repair Tag.
197. Journal Voucher.
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200. Record of Claims Audited. | 201. Voucher Record.
202. Revenue Accounts and Balance Sheet.
203. Gas and Electric Light Business.
204. Installation Record.
205. Mineral Water Business.
206. Special Ledger.
207. Wholesale Drug Business.
208. Purchase Record.
209. Combination Order Blank, Bill, and Charge Sheet.
210. Sales Recapitulation.
211. Cashier's Daily Report. |
|---|---|

EXERCISES.

I.

Suggest a system for taking care of cash subscriptions received through the mail for a magazine—five hundred remittances being received daily.

2.

Divide the sales ledgers of a wholesale business territorially, providing purchase, general, and private ledgers. Arrange cash book and journal in a suitable manner, furnishing sketches of these books, and explain method of proving the accuracy of the work each month.

3.

In a large plumbing and contracting business, it is desired to remodel the system employed so as to show accurately the cost of material and labor employed on each job.

The shop is now in charge of a foreman who makes verbal estimates on small jobs and repairs, simply making a memorandum of same for his own information. He sends his men to purchase supplies when they are needed, and the bills are all debited to merchandise account when received. When a job is completed, the foreman turns in a memo. charge to the book-keeper, who enters it in a charge book, the total of which is credited to merchandise.

On large contracts, written estimates are furnished, being copied in an

estimate book. When a contract is obtained the party for whom the work is to be done is debited with the amount of contract, and an account called "Special Contract Account" is credited. All material and labor is carried on memorandum until the job is completed, when it is debited to Special Contract account and credited to Mdse. and Labor accounts.

No trial balance has ever been obtained.

We will suppose that the business is carried on by two partners, one of whom desires to introduce up-to-date and reasonable accounting methods, while the other opposes the idea of change and considers the way in which the business has hitherto been run entirely satisfactory, because the results have been satisfactory in regard to profits made.

Point out the disadvantages of the methods in use, and the advantages to be obtained by adopting improved methods, with the object of convincing the objecting partner.

Formulate an up-to-date system which will remedy the defects above indicated, and furnish a clear exhibit of all the transactions of the business, treating repairs as a separate department.

Draw sketches of forms to be used, and pay special attention to contracting record and the purchase of supplies.

NOTICE.

Subscribers will please be careful to write their names and addresses on answers to exercises sent in.

In cases where this is not done we cannot identify the senders.

INSTALLMENT IX

. The Devising of Special Systems of Accounts and Cost Accounting

The Devising of Special Systems of Accounts

Text Books referred to:

American Business and Accounting Encyclopædia—(A. B. & A. E.)

Thorne's 20th Century Book-Keeping and Business Practice.—(Th. M.)

(212) The following account books were recently devised by a member of the N. A. A. B. to meet the requirements of an oil mill company, and will form a valuable study in the art of devising special forms.

The records are designed to cover:

- a. Mill Superintendent's record of Cotton Seed received.
- b. Cotton Seed Purchases Books, provided for receipts by railroad, river and wagon. Written up from invoices and Superintendent's Shipping Book.
- c. Shipping Book kept by Shipping Clerk.

[illegible]

d. Order and Shipment Record written up from orders and Shipping Book. So arranged as to constitute a plain record of unfilled orders.

- e. Retail Sales Order Record.
- f. Regular Sales and Department Distribution Book written up from "Order and Shipment" and "Retail Sales" books, being a record of actual daily sales from which postings are made.

[illegible]

- g. Pay Roll and Pay Roll distribution.
- h. Combination Cash Journal.
- i. Check Register.
- j. Special Ledger with quantity columns.

The illustrations do not include time records in mill, but the Superintendent keeps a daily time book showing hours employed in each department, the totals of which are carried to the Pay Roll Recapitulation and must agree with total time paid for.

(213) Forms No. 1a and 1b and No. 2 are records of Cotton Seed purchased and received by Railroad, River, and Wagon. Account Sales and

216

Cotton Seed Purchases (Wagon Receipts)

190

[illegible]

FORM 2

paying Vouchers are made from these records. "Pay Vouchers" are recorded in combined General Journal and Voucher Record."

(214) No. 3a and No. 3b are Pay Roll and Recapitulation, or Distribution of Pay Roll. The Pay Roll is made up from the Superintendent's daily time book, which has a column for "Department" in which men are employed.

Caruthersville Oil Mill Co

Pay Roll for Week ending

100

[illegible]

COPY 3.4

The columns in "Dist. P. R." are to be headed with the different departments and each department's portion of P. R. for the week entered in its special column. This information is taken from the Superintendent's daily time book, which shows "department" in which each man is employed. All

Pay Roll Recapitulation or Distribution

[illegible]

FORM 3-B

labor is by the day, there being no "piece" work. The laws of some southern states require that employes sign Pay Roll.

(215) Form No. 4 is a record of sales of product, which is not always shipped at time sale is made, and one "Sale" frequently requires several shipments. A memorandum of the sale is made in the "Name" and "Residence" column of the book. Amount of different products, prices, etc., being writ-

ક્રિ. ૧૦૦ ૦૫

Shipments of

[illegible]

FORM 4

The book is subdivided for the different products per "Specifications." (216) Form No. 5 is a record of local sales of Hulls and Meal in wagon load lots. Total for each day being carried to Sales, or Recapitulation of Shipments. These sales are supposed to be for cash, but some are on account.

The book is subdivided for the different products per "Specifications."

(216) Form No. 5 is a record of local sales of Hulls and Meal in wagon load lots. Total for each day being carried to Sales, or Recapitulation of Shipments. These sales are supposed to be for cash, but some are on account.

Retail Sales

[illegible]

FORM 15

The "Remark" column takes care of this information and total of cash sales is entered in "Cash" column of General Journal daily.

(217) Form No. 6 is a salse book and recapitulation of shipments, from the "Sales and Shipments" book, itemized; and the "Retail Sales" book, daily

Sales or Recapitulation of Shipments

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

totals. This gives the total shipments or actual sales, daily totals of which are credited to the different "Product" accounts in General Journal and total of these credits debited to "Sales Accounts Receivable."

In the Cotton Seed Oil business all sales, or shipments, are for cash, so a sight draft is made on the purchaser for each shipment and deposited as cash.

Check Registers

Checks Drawn on

[illegible]

FROM 2

and entered accordingly in the "Cash" column in the "General Journal," carrying the corresponding credit to the "Sales Accounts Receivable" column. (The balance of the "Sales Accounts Receivable" account, when posted to date, will give the total of open sales accounts on the "Sales Ledger.")

(218) Forms No. 8 and No. 9 are receiving and shippings books, peculiar to the business, and are written up by the shipping clerk or superintendent and turned over to the book-keeper from which to write up "Purchases" and "Shipments" books.

[illegible]

(219) Form No. 10 is a combination, General Journal, Voucher Record, and Cash Book.

[illegible]

Explanation has been made in regard to the "Cash Book" portion of same in remarks on Form No. 6.

The headings of columns will explain the "Voucher Record" portion of it, except that the title of the account to be debited should be written in the

[illegible]

FORM 10

[illegible]

PL 104-191

"Debit" column, and "Accounts Payable" in the "Credit" column, and the person or firm's name, in whose favor the voucher is drawn, in the "Remarks" column.

(220) Remarks made on Form No. 6 apply to this also. Total of checks drawn for the day, per "Check Register," should be credited to Bank Account, and charged to Accounts Payable. (The balance of Accounts Payable" accounts will always show amount of unpaid vouchers on hand.)

By reserving a line at top and bottom of page for forwarding monthly totals, this book will show the financial standing of the business at all times.

Sundry expenditures are made from "Petty Cash," record of which is kept on a day book, and distributed monthly to the different accounts to which same should be charged, and entered accordingly (in General Journal) to the debit of these accounts and the total amount expended credited to the "Petty Cash" account.

(221) Form No. 11 is an ordinary center ruled ledger, with the exception of the vertical ruling in the "Remark" columns. These are for weights of Seed purchased, entered monthly from "Purchases" books. Also, for gallons and weights of products, entered monthly from "Recapitulation of Shipments" book. The corresponding "Amt." posting will be made from the "General Journal."

[illegible]

The "Purchase" division of Ledger is for extraordinary occasions, such as purchase of machinery, where long "time" is granted, etc.

Cost Accounting

Reference Text Book—Hall's Manufacturing Cost, (H. M.).

(222) Where the cost records of a manufacturing business are kept in the main office the cost ledger should be separate from the general books, the raw material and other accounts being closed on the cost ledger by transfer to Factory account in the general ledger. Factory account is credited with cost of completed orders which are debited to Manufactured Stock account. It will, therefore, be seen that the balance of Factory account (to which all purchases of material and supplies necessary for the manufacture of the product, and all labor in connection with the manufacture of the product are charged, and all completed jobs credited) represents material issued and labor so far performed on uncompleted work, thus constituting the factory inventory.

(223) REPAIRS.

(224) We submit illustration of combination charge ticket and cost card for a repair shop or department.

Name <u>L. K. Miller</u>		Date <u>Aug. 12-'04</u>	
Street No. <u>471 Main St</u>		Town and State <u>Shelby, Ill.</u>	
Description of Repair: <u>Put on new rear wheel and shaft. Tighten tire of other rear wheel and general overhauling.</u>			
Material Used.	Cost	%	Charge
1 Rear Wheel	12 00	25	15 00
1 S. Shaft	11 00	25	13 75
Labor- days 18 hrs. mts @ 50¢ per hr	9 00	25	2 25
	32 00		
Running Expense 20%	6 40		
Repaired by: <u>Dodson.</u>	38 40		
			Total Charged
			40 00

(225) The combination repair order card and charge coupon is made in duplicate, the original of medium paper which is delivered to the customer, the duplicate being retained. If cash is paid the receipt coupon is filled out and delivered to the customer and the charge coupon retained for the purpose of making entries. If the amount is to be charged to the account of the customer the charge coupon is delivered, and the receipt coupon is retained, and after entries have been made thereon filed in numerical order and may thereafter be used as a bill for collection purposes at the end of the month, thus providing a check on receipts and collections.

Repair Order No.		Date Recd.		Date Delivered	
Adrian Cartmox & Wagon Co.		Charge			
What		\$		FOREMAN.	
Repairs				L. M.	
Wood Work by No					
(Material)					
"					
Smoothing by No					
(Material)					
"					
Painting by No					
(Material)					
"					
Trimming by No					
(Material)					
"					
Material					
Labor					
Added Cost					
Total Charge					

Charge Coupon	Repair Order No. _____	Date Recd. Delivered _____	R. No. _____	Date _____	To Adams Carriage & Wagon Co.	Account of _____	Received Payment _____	Date _____	Signature _____
	Adams Carriage & Wagon Co.	Charge _____		Dr. _____	Dollars _____				
	What _____	\$ _____							
	Repairs _____	Foreman _____							

[illegible]

(227) MANUFACTURING AND GENERAL EXPENSE.

225-228

It has frequently been proved by experience that an average of the factory expense (cost of running plant, rent, unproductive labor, etc.) based on current records and diffused over cost of wages comes nearer to absolute accuracy than any other method.

The reason an average is struck is to avoid delay in billing. If the exact figures were used, it would involve holding bills until the end of each month. Further, the comparison of factory expense with cost of labor serves in providing a check on any unjustifiable increase of the former which should always bear the same approximate ratio to amount of factory product. (See Hall's "Manufacturing Cost," pages 42, 115, 116 and 117).

The same methods, however, are not suitable, and cannot be used in all cases, and various modifications must be adopted to comply with the requirements of differing conditions.

(229) In the wholesale jewelry business the percentage of general expense cannot be a fixed one. For some accounts a percentage based upon the total sales may be used. In other instances the average percentage of work performed, say by the buffing department, for other departments during the year must be used; so that this distribution must depend upon, and can be accomplished correctly, only by the accountant possessing a thorough knowledge of the detail of the business involved.

(230) In a repair department, as above described, it will be readily appreciated that repair work should not be charged with the cost of selling manufactured goods, and necessary distinctions of this kind must always be watched for, if expense is to be pro-rated accurately and intelligently with a view to establishing an equitable burden.

The methods generally used for diffusing factory expense are:

(231)

MACHINE RATE.

Each machine is charged at a fixed rate per year, month or day, determined by past experience. This is open to the objection that we are charging without knowing how we are coming out. The costs which should be distributed are the costs which accrue during the current period, not the costs of a similar period last year.

(232)

MACHINE HOUR.

If there are one hundred machines in the shop, and the period is four-weekly; we will have 2,400 machine days or 24,000 machine hours. The manufacturing costs to be distributed amount to \$2,400. The rate will be ten cents per machine hour. The machine hours represented in any order multiplied by the rate gives its pro rata of the manufacturing cost.

(233)

MAN-HOUR.

The total hours of labor for the period, of all kinds regardless of the rate of wages, is divided into the sum to be spread. The quotient is the rate

per hour, which, multiplied by the man-hours in each cost account, gives its share of manufacturing costs for the period.

The principal objection to the plan of distribution by hours lays in the variety of machine and man labor performed, some work being done by high priced men and expensive machinery, and other work done by unskilled labor and cheap machines. By the method indicated, the expense being pro-rated on the basis of hours, the expensive hours would not bear any greater burden than the cheap hours. This is often a very serious matter where considerable competition exists.

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| 213—Cotton Seed Records. | 225—Combination Cost Card and Charge Coupon. |
| 214—Pay Roll. | 226—Repairs Accounts Receivable. |
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| 223—Repairs Cost Record. | |

EXERCISES

I.

A small machinery manufacturing firm has been keeping its books by single entry without cost records. It is now changed to a corporation, and it is desired to keep the books thereafter by double entry and to install a good system of keeping track of work done, cost, and profit on same. There is a large Repair Department.

The trade is local, orders being received over telephone and by mail. Material consists mostly of castings (purchased complete), bolts, nuts, etc. Tools is an important expense. Stock of tools and regular supplies kept on shelves in shop.

Outline method of changing books to double entry, and devise simple and efficient shop records for a business of the size indicated. Submit sketches of forms.

2.

From the following particulars, by method described in par. 228 of lesson, make a cost summary of completed orders, showing total productive cost, material used, labor, proportion of manufacturing expense and unproductive labor, addition of 10 per cent. on total cost to cover administrative and selling expense, addition of 25 per cent. profit, total charge to customer.

SCHEDULE OF COMPLETED JOBS.

Order No.	Total Productive Cost.	Material.	Labor.
2056	\$125.50	\$83.67	\$41.83
7	274.50	183.00	91.50
8	300.00	200.00	100.00
9	18.75	12.50	6.25
60	128.25	85.50	42.75
1	964.00	642.67	321.33
2	1010.00	673.34	336.66
3	25.00	16.67	8.33
4	178.00	118.67	59.33
5	250.00	166.67	83.33
6	292.75	195.17	97.58
7	1,164.00	776.00	388.00
8	50.00	33.34	16.66
9	125.00	83.33	41.67
2070	87.50	58.34	29.16
	<u>\$4,993.25</u>	<u>\$3,328.87</u>	<u>\$1,664.38</u>

SCHEDULE OF MANUFACTURING EXPENSE AND UNPRODUCTIVE LABOR.

Superintendent's Salary	\$200.00
Stores-keeper's "	80.00
Foremen's "	80.00
Engineer's "	60.00
Night Watchman's "	50.00
2 General Helpers' "	80.00
Rent and light	85.00
Coal and oil	28.00
Maintenance expense	16.50
Sundry Manufacturing Expenses.....	8.75

3.

In the retail hat business it is very desirable to provide a convenient stock record of the different sizes, which can be constantly referred to, and which will show when the supply of any particular size is getting low and should be replenished. We will suppose that one particular quality of hat is made in the following sizes:

6¾, 6½, 6⅜, 6¾, 7, 7⅛, 7¼, 7⅜, 7½, 7⅝, 7¾.

This is a black soft hat style No. 875.

Submit sketch and explanation of suitable form of stock record.

INSTALLMENT X

The Devising of Special Systems of Accounts; Savings
and Loan Associations; Savings Banks;
Plantation Accounts

The Devising of Special Systems of Accounts

Text Book referred to:

American Business and Accounting Encyclopaedia (A. B. & A. E.)

No better illustrations of the devising of special forms with the object of meeting special requirements could be found than in the savings and national banks, and savings and loan associations. A short time devoted to the study of forms used in these lines of commerce, and to the reasons why they are used, will undoubtedly be of considerable benefit to the accounting student.

SAVINGS AND LOAN ASSOCIATIONS.

(234) Taking savings and loan associations first, the attached chart will be found instructive, giving a very clear idea of the field covered by the accounting records.

Chart	Investment Section....	Agents	Application. Report. Collection Report.
		Office.....	Application. Certificate Prepaid. " Installment. " Record.
	Loaning Section.....	Agents	Application for Loan. Confidential Report. Local Attorneys Certificate.
		Office.....	Mortgage Record. Tax Record. Tax List (for information). Insurance Expirations (Cards).
	Administrative Section..	Secretary.....	Voucher "Receipt." Voucher "Disbursements." Cash—Journal.
			Ledgers { Investing Stockholder { Card Borrowing " { System. Prepaid " { Loose Leaf Real Estate. " { System. Real Estate Contract. General.
			Trial Balance. Report of Receipts and Deductions. Report of Vouchers.
		Treasurer	Cash Book. Daily Cash Report. Check. Treasurer's Report. Reconciliation Statement.

Chart of the Administrative Department of the Standard Savings and Loan Association.

(235) The forms of application for stock and report of collections, are not of particular interest, but the form of prepaid stockholders' ledger

(loose-leaf) is original, recording separately, on the debit side, withdrawals of capital invested, and dividends paid, besides carrying a record of the pre-paid stock issued. This form of investment is called pre-paid stock to distinguish it from investments on the installment plan. It is a preferred stock for the reason that a 5% dividend is guaranteed, whereas, ordinary investments are merely participating, according to the earnings.

Sheet No. _____

Account No. _____

Name _____

Transferred to _____

Place { _____

Place _____

Address _____

State _____

Address _____

State _____

Occupation _____

County _____

County _____

Date of Transfer _____

Series No.	WITHDRAWALS						✓	Amount Paid	Certificate No.	No. of Shares	Date Paid	Date of Issue		Name of Agent	Series No.
	Dividends Paid	Date	No. of Shares	Certificate No.	Amount Paid	Yr.						Mo.			

Prepaid Stockholder's Ledger.

At the close of each month, the number of shares as entered in the pre-paid ledger, is compared with the stock records and agreed as to number of shares issued. The amount paid on the stock and credited to the respective accounts must agree with the amount received from the sale of this stock, as shown by the Controlling account in the general ledger.

(236) The ledger used for ordinary investors is also illustrated. An important provision in this case is the separate record of dues, interest and premium, and fines. As separate columns are also provided for these

Name _____

Cert. No. _____

Board No. _____

Street _____

No. _____

Town _____

State _____

No. Shares _____

Dated _____

Class _____

Series _____

Tf'd to _____

189 _____

at _____

No. Loan _____

Amount, \$ _____

Date _____

Mo. Pay't. { Dues, \$ _____

Ag't. _____

{ I. & P. \$ _____

With'd'n _____

189 _____

Amt. pd. \$ _____

Month paid for	Date Pay't Rec'd	Monthly Dues	Interest and Premium	Fines		Items	Sundry Accts.		No. Pay. Rec.
				Dr.	Cr.		Dr.	Cr.	
									1
									2
									3

Regular Investor's Ledger

items in the cash-book, it can easily be seen that proof by sectionalization is carried out to the uttermost possible extent, a recapitulation from the ledger pages being agreed with the totals from books of original entry.

(237) The dividend record simply shows certificate numbers, date, and amount, this being all the information necessary.

(238) The reports required by the Board of Directors of an association of this kind are appended and are very complete in their nature, a record being furnished of all moneys received, and to what accounts the same have been applied, as well as in regard to deductions for sundry items.

Standard Savings and Loan Association- Secretary's Report for The Month Ending _____ 190_

	Order No.	Trans No.	Mtg. Loans	Stock Loans	Withdrawals	Real Estate	EXPENSE							Sund.	Total	Receipts
							Office and Direct Salaries	Employees' Salaries	Postage	Printing and Stationery	Telegrams and Express	Legal Services	Regr.			
Balance on Hand as per last Report																
Receipts																
CONTRA.																
Balance Overdrawn																

To The Board of Directors of the Standard Savings and Loan Association:
Your Executive Committee has examined the above Report, and compared same with the Books of the Association, and find it to be correct.

Executive Committee

Detroit, Mich. _____ 190_

RECAPITULATION.

Mortgage Loans

Stock

Withdrawals

Real Estate

Expense

Sundries

Balance Overdrawn

Balance in Treas. Hands

Secretary

Standard Savings and Loan Association- Receipts and Deductions for Month Ending _____ 190_

RECEIPTS.					
Mortgage Loans					
Stock					
Class A Installment Stock					
Interest on Premiums					
Prepaid Installment Stock					
Interest on Premiums					
Membership and Withdrawal Fees					
Transfer Fees					
Insurance and Taxes					
Personal Account					
Real Estate - Regs.					
Contracts					
Sundries					
DEDUCTIONS.					
Class A Installment Stock Withdrawal					
Interest on Withdrawals					
Discount					
Insurance and Taxes					
Personal Account					
Real Estate - Insurance - Taxes and Repairs					
Contracts					
Sundries					
Local Treasurer's Commissions					
Net Receipts as per Cash Journal					

Standard Savings and Loan Association.

Treasurer's Report.

Balance on Hand as per Last Report,					
Receipts for the Month Ending	190				
CONTRA.					
Balance Overdrawn					
Order No.	To No.	Inclusive	Balance Overdrawn		
			Balance in Treasurer's Hand		

To The Board of Directors of the Standard Savings and Loan Association:
Your Executive Committee has Examined the above Report, and compared same with the Books of the Association, and the Report of the Secretary, and find it to be correct.

Executive Committee

Detroit, Mich. _____ 190_

Treasurer:

STOCK AND MUTUAL SAVINGS BANKS.

(239) The special system used by a large Cleveland Mutual Savings Bank was described and illustrated in the October, 1903, number of the Book-Keeper & Business Man's Magazine. The form of card ledger used is illustrated in Th. M., paragraph 373.

(240) We show a skeleton form of balance sheet, such as is required by savings banks operating under New York laws.

ASSETS.		LIABILITIES.	
AVAILABLE FUND.			
Cash	\$....	Depositors	\$....
Loans .....	....	Dividend accrued .....	....
		Surplus .....	....
INVESTMENTS.		Total.....	\$....
Public Securities—			
Bonds of U. S. ....	....	
Bonds of Cities in N. Y. S.....	....	
Bonds of N. Y. State.....	....	
Bonds of Counties in N. Y. S....	....	
Bonds of Villages in N. Y. S....	....	
Bonds of Towns in N. Y. S.....	....	
Bonds of School Dists. in N.Y.S..	....	
Bonds of other States and Cities..	....	
Railroad Bonds .....	....	
Mortgages .....	....	
Bank Premises .....	....	
Other Real Estate .....	....	
FLOATING ASSETS.			
Interest Receivable—			
Accrued .....	....	
Overdue .....	....	
Rent Receivable—			
Accrued .....	....	
Overdue .....	....	
Total.....	\$....		

As many of these savings banks have a very large number of deposit accounts to deal with, ranging from 20,000 to as many as 75,000, the methods they adopt to obtain prompt trial balances of deposit accounts will be of general interest, because most of these methods may be adapted to the requirements of any commercial establishment where large numbers of accounts must be taken care of.

(241) In one bank with over 20,000 open accounts, these are carried in 18 loose leaf ledgers. For the purpose of taking a trial balance these ledgers are sub-divided into groups of three, and at least four times in each year there is a trial balance of each group. In this institution the use of special forms for taking this balance is not considered necessary, and the whole thing is done by means of the adding machine. The adding machine slips are kept on file for at least a year, to provide for the contingency of error in future proofs, and are then destroyed. A sheet is kept in each ledger showing a record of each balance and the date upon

which it was taken.

Another bank uses printed sheets for taking off deposits. Each sheet is ruled to carry the number and amount of the account, and is capable of holding 400 accounts in columns of 50 each. When the balance is taken, the sheets for each ledger are placed in separate binders, thus offering a duplicate of the given ledger on the balance date. This is somewhat a laborious method, but is referred to in order to make our illustration more complete.

Another savings bank takes its trial balance only semi-annually, and for the purpose has specially prepared sheets. These sheets are 10x18 inches in size, and are ruled to carry 25 lines, one for each account, on each side. Each side is also vertically ruled for 14 columns. The first is for the number of the account, the next for the balance, the next for the receipts, the next for the payments, and the next for the interest, and then the balance again, so that the transactions for three periods of six months each can be entered on one side of the sheet. The object of this is to obviate setting down the figures from the ledgers more than once in three years, and at the same time to prove the deposits, withdrawals and dividends. When the sheets are out of use they are bound and filed.

A large mutual savings bank in New York has a very complete checking system, the description of which we quote from the head of its accounting department:

“In this explanation of the trial balance system it is best to begin at the close of business in the tellers department and proceed through the different stages to the final result. It is desired however to first impress clearly what is considered the strong point of the system. This is the employment of two separate and distinct sets of ledgers, namely, dealers’ ledgers, and balance ledgers; the latter being used as a check upon the former. At first thought, this scheme might seem to entail much unnecessary work, but in the end the facility with which the accounts are proved, and an exact trial balance reached, appears to us to outweigh any objections which may be raised against it.

Dealers’ Ledgers and Cash Books.—The tellers’ cash having been proved, the draft and deposit tickets are first posted in the dealers’ ledgers, which are of the three column pattern, and which contain the number and full title of each account. The balances are extended after each posting.

The tickets are then turned over to another book-keeper, who enters them in the daily cash books, of which there are two, one each for drafts and deposits. Entries in these books are arranged in sections of 2,000 accounts each, and after the footing of each section is extended, the grand total of all of them should agree with the teller’s proof book.

Section Balances is the title of a ledger in which all the accounts of the bank are arranged by sections, consisting of about 2,000 accounts each, and into which are posted from the daily cash books, where the transactions are arranged by corresponding sections, the totals of drafts and deposits in each section.

SECTION							
DATE	APRIL.		MAY.		JUNE		DATE
	DRAFTS.	DEPOSITS.	DRAFTS.	DEPOSITS.	DRAFTS.	DEPOSITS.	
1							3
2							3
3							4
4							5
5							

BAL. APRIL 1ST.		BAL. MAY 1ST		BAL. JUNE 1ST.	

In this ticklers are used. These are thin paper books in which are

first copied all the numbers of open accounts, page by page, agreeing with the balance ledgers from which the numbers are taken.

They are then taken to the dealers' ledgers and balances filled in. The balances having been simultaneously extended on the balance ledgers by other book-keepers, they are carefully compared with the ticklers, account by account, and any discrepancies which may appear are corrected. After comparison, both ticklers and balance ledgers are footed and proved, page by page. It is now readily seen how the balance ledgers are a complete check upon the dealers' ledgers.

The total of each section agreeing with the balance as shown by section balance ledger is considered a perfect proof. The grand total of all sections constitutes the full amount due to depositors. By this system four clerks are enabled to take an exact trial balance of about 22,000 accounts in less than three weeks' time while attending to their routine work.

Outside of its simplicity this system commends itself from the fact that the semi-annual dividend payable in January and July, is figured in these same ticklers, using the figures of the trial balance as a basis. Amounts drawing three and six months' interest are extended in separate columns. The correctness of computations is readily proved by using the footings of balances on each page, which are absolutely correct, as a basis of such proof. Interest is posted in both dealers' ledgers and balance ledgers from these ticklers. It will be seen that one set of numbers suffices for two trial balances and two dividends.

In reviewing this system it seems desirable to emphasize several of its marked advantages. In the first place it proves the correctness of the postings and balance of each individual account in the dealers' ledgers, the aggregate of each section, and the full amount due depositors as shown by the general ledger.

Then again it proves the correctness of all entries and footings in the daily cash books.

Lastly it proves the correctness of the computation and posting of the dividend on each individual account, as well as the grand total."

STOCK SAVINGS BANK.

(242) A "stock savings bank" is one in which the earnings, over and above the usual interest, instead of being accumulated for the benefit of depositors are paid out to stockholders in the form of dividends.

There are two sets of books used in a savings bank—one for depositor's business and a general set.

The forms used for depositors' business may be briefly described as follows:

DEPOSITOR'S CARD.

(243) This card is filled out by a bank clerk assigned for the purpose

and signed by the intending depositor. The card is intended to contain sufficient information for future identification, but at some banks it is customary to record the color of the eyes and to take a snap-shot picture of the depositor.

(244) A pass book is handed to the depositor, bearing the same number as the card, and the amount deposited placed to his credit in a book called "First Deposit Record."

This book contains only particulars of first deposits and is a permanent record of pass books issued.

(245) Subsequent deposits are entered in the "Credit Book;" withdrawals are recorded in the "Debit Book;" these two books constituting the Depositors' Cash Book. From these books the Depositors' Ledger is posted.

NO. 85276	DATE
NAME	
RESIDENCE	
OCCUPATION	
WHEN BORN	
WHERE BORN	
PARENTS	
HUSBAND OR WIFE	
SIGNATURE	
SIGNATURE	
SUBJECT TO THE ORDER OF EITHER; THE BALANCE AT THE DEATH OF EITHER TO BELONG TO THE SURVIVOR.	

(246) As a safeguard against fraud the following system has been suggested:

Let every deposit be evidenced by a ticket, and every draft by a receipt made out whenever possible by the depositor, and the passbook entries thereon made by a machine which shall duplicate the record (with the addition of the number of the account) on a tape and add the results. At the end of day check tellers' receipt and payments with totals as shown by machines. Let posting to individual accounts be direct from tickets by balance posting, i. e., let book-keeper No. 1, with a ticket in his hand, turn to the individual account and compute from the old balance and the amount on the ticket the new balance, and enter same in the balance column in the ledger, together with the date. Let book-keeper number two go over the ledger accounts after number one and extract from the old and new balances the entry; and make it in the ledger. Let book-keeper number three enter

on a long sheet from the tickets the number of the account, the amount, and the first three letters of the name. Then let book-keeper number four check the sheet against the ledger accounts, comparing amounts and supplying the remainder of each name.

This will prove that the amounts on the tickets have been correctly posted, and that the correct amounts have been posted to the proper ac-

Saturday			Monday, Apr. 30, 1900.				Tuesday, May 1	
Balance	Line No.	Resources.	Debit.	Credit	Dr. Balance	Debit.	Credit	
118444	96	1 Loans ³ / ₄ Discts.	2825	1575	119694	96		
1000		2 U.S. Bonds			1000			
5000		3 Banking Houses & Lot			5000			
		4 Other Real Estate						
1032	50	5 Furn. ¹ / ₂ Fixt's.			1032	50		
5000		6 Stocks, Bonds &c.			5000			
5780	24	7 Cash	15364 62	15351 03	5793	83		
174	34	8 Expense Acct.	30 30	2194 64				
20	85	9 Interest Debit.	54	21 39				
456	26	10 Empire Bank	879 50	1335 76				
1948	02	11 Waverly Bank	1550	261 60	3236	42		
4	50	12 Citizens Bank	8157	918 76				
12502	30	13 Fourteenth Natl. Bk.	1086 72	4133 32	9455	70		
4316	44	14 Farmers Natl. Bk.	4671 76	20569	8782	51		
		15						
		16						
		17						
155680	41	Totals			158995	92		
Liabilities.			Debit	Credit	Cr. Balance	Debit	Credit	
30000		1 Capital Stock			30000			
9000		2 Surplus Fund			9000			
500		3 Undivided Profits			500			
37010	20	4 Individual Deps.	3656	5226 21	38580	41		
78216	17	5 Certificates of Dep.	243 14	1245 75	79218	78		
		6 Cashier Checks	250	325	75			
75	75	7 Certified Checks	75 75	50	50			
513	60	8 Discount Recd.	24551 65	37 55				
4	42	9 Exchange	22 75	3 55				
		10 Interest Credit	24 36 48	36 43				
		11 Empire Bank						
		12 Citizens Bank		832 69	832 69			
		13 Dividends Unpaid						
		14						
360	27	15 Profit ¹ / ₂ loss	exp 194 64 Int 21 39	dis 551 15 Exc 7 22 Int 36 43	739 04			
		16						
		17						
155680	41	Totals			158995	92		

counts. The totals of the sheets above mentioned being checked against teller's reports, will prove that the sums paid in and withdrawn by depositors have been correctly posted to the proper individual accounts.

(247) We illustrate the form of Trial Balance generally used in these banks, with explanation of purpose and operation.

The number of the account and the balance are called off from the ledger by one clerk and entered in the balance book by another, in the first

TRIAL BALANCE			DATE
NO. OF ACCT'Y.	BALANCE	INTEREST	TOTAL BALANCE

and second columns respectively. When the first section of accounts has been entered, the amounts are footed and the total verified by the proof book. The remaining sections are taken off and varified in like manner. Then the interest is computed on accounts and entered in the ledger in red ink, in the column of deposits. Next, these items of interest are called off and the total balance at once written in the ledger in red ink, in the column of balance ; which he then enters in the last column of his book, at the same time, for the purpose of verification, calling back the amount. The grand total of the total balance column represents the aggregate balance on the ledgers ; and the total balance of each section represents the figures for that section and is entered on the proper page of the proof book, as the basis for the work of the succeeding year or period.

STATE AND NATIONAL BANKS.

(248) The accounting methods used in state and national banks form a distinct department of accounting and are of too voluminous a nature to permit of much attention in this Course. Those interested are recommended to obtain "Barrett's Modern Banking Methods and Practical Bank Book-Keeping."

(249) The vast amount of detail entering into the accounting system of a large bank will be appreciated from the chart presented on another page.

(250) The Boston Ledger Daily Balance Sheet illustrated, is in many banks recorded on a combination cash-journal and general ledger, similar to that shown in the A. B. & A. E., insert pages 760-1.

(251) The Boston Bank Ledger is popular on account of the facilities it offers for obtaining daily trial balance, but many objections are raised on account of its unwieldiness in bound form. It is, therefore, of interest to

CHART

RECEIVING TELLER
One Assistant after
12 M and a second
if necessary

Receives all cash deposits that are to be credited to accounts on the individual ledgers. Makes out all deposit tickets for cash sent by country customers for credit on individual ledgers. Receives call loans as cash deposits and charges out to paying teller. Collects exchange on items deposited and turns over to note teller for credit.

NOTE TELLER
One Assistant on
evening call

Receives all cash remittances that are to be credited on the general ledger and enters them on his cash book. Receipts for all express packages. Draws all drafts on correspondents. Receives payment for all discounted and collection notes due in the city and for such drafts as are not collected by the runner. Checks up the runner's book and credits such drafts, etc., as have been paid. If any of them are for the credit of individuals, he pays the receiving teller. Makes all credits for the general ledger except the journal and discount books. Issues Clearing House certificates. Collects and credits interests on Call Loans. Collects and credits Call Loans. Collects and credits exchange. Draws cashier's check for total exchange paid and charges to first teller.

PAYING TELLER
Assistant in charge
of debit Cash Book.
A second assistant
on busy days.

Pays checks, etc. presented at the counter to be cashed. Has charge of all the cash of the bank, checks, notes and acceptances presented for that purpose. Charges out to the out of town correspondents all cash paper sent off for collection. Sells currency to customers and to Washington for redemption. Has charge of the exchange for the Clearing House, and receives the exchange and settles the lists. Pays or receives Clearing House balances. Charges out all general ledger debits except those on the journal and discount books. Pays Clearing House certificates.

DISCOUNT CLERK

Receives paper that has been approved by the proper officers, calculates the discount and reports the proceeds to the bookkeeper. Has charge of the unexpired paper, and delivers it to the note teller as it becomes due. Keeps all the records pertaining to the discount department and to the credit department. Calculates the interest on certificates of deposit as they are paid. Has charge of call loans, calculates interests and reports to note teller.

CITY COLLECTION CLERK

Receives and records all collections payable in the city. Has charge of same and delivers them to the note teller as they mature. Transfers for the discount clerk all discounts paid out of time. Keeps the Remittance Ledger for the general bookkeeper.

**PRESIDENT
CASHIER**

CORRESPONDENCE CLERK
Two assistants and
stenographer part
of the day

Receives and has charge of all foreign collections, forwards them to the proper points for payment. Receives from the discount clerk as they are put up, all foreign items and forwards them for collection at the proper place. Journals all items that have been reported paid. Writes all routine letters to regular correspondents, acknowledging the receipt of remittances, and enclosing remittance items for payment or collection. Acknowledges receipt of deposits for credit of country accounts; (individual ledgers). Keeps records of letters sent out and acknowledged. Opens and checks the mail, separating enclosures to be distributed to the proper departments. Puts up and posts outgoing mail.

BOOKER
One Assistant

Receives and collects all drafts on city parties. Delivers returned drafts and notes to city customers. Keeps proper records. Makes out and delivers notices for all collection and discounted notes payable in the city. After return from the run and settlement assists in whatever department he is assigned to.

INDIVIDUAL BOOKKEEPERS
First-Second and Third

Has charge of the individual accounts. Credit all deposits received by the receiving teller, all collections made by the note teller for their department and all foreign collections that have been journalized by the collection clerk, also proceeds of discounts. Charge all checks that have been paid or certified. They are responsible for all overdrafts and must settle daily with the figures of the general bookkeeper. They examine the checks received from the Clearing House for signatures, endorsements and balances, and, under the direction of the Controller assist in the settlement of the lists.

CONTROLLER
All uncompleted
Assistants

Has charge of the lists for the Clearing House in the morning (First Teller). Opens and asserts the lists received from the Clearing House. Has charge of the settlement (assisted by individual bookkeepers) Receives from the individual bookkeepers all checks and deposit tickets after they have been charged and credited. Makes out tickets for the remaining credits. Files and has charge of all checks and tickets. Writes up all pass books and statements of accounts (individual ledgers). Enters all credited credits on pass books, and delivers or mails all statements. Examines individual ledgers, makes examinations of general ledgers, discount department and any other department under the direction of the Cashier or President. Assists the committee of the Board to count the cash and make examinations. Has charge of all unattached clerks and assigns them to various duties.

GENERAL BOOKKEEPER

Keeps the general books of the bank including all accounts with correspondents not on the individual ledger. Has general charge of bookkeeping, and is responsible for the settlement of individual bookkeepers. Makes up the daily statement and such statements as are called for by the State Auditor.

know that a loose-leaf Boston Ledger has now been devised, provided with the usual long and short leaves, but the long leaves being used exclusively for the names of accounts and index tabs, and the short leaves being used exclusively for the entries and record of daily balances. At convenient intervals, the short leaves are removed to a transfer binder which is also provided with a set of index long leaves, being exact duplicates of those in the current binder; thus, the current binder contains only active accounts and the current transactions of active accounts.

There seems no reason why this device should not work satisfactorily, and be applied to general commercial usage.

PLANTATION TIME RECORDS.

(252) On a large sugar plantation, the following methods are used for keeping record of employees' time:—

When a new man comes to the plantation, he is furnished with an

No.....

OLAA SUGAR CO.

I ..

MONDAY			THURSDAY		
1/2	1	2	2	1	1/2
3	4	5	5	4	3
TUESDAY			FRIDAY		
1/2	1	2	2	1	1/2
3	4	5	5	4	3
WEDNESDAY			SATURDAY		
1/2	1	2	2	1	1/2
3	4	5	5	4	3
SUNDAY					
1/2	1	2	3	4	5

Total days.....

Overtime..... hrs.

1/2 | 1/2 | 1/2 | 1/4 | 1/2						
No.						
1	PAY CHECK					49
2	Olaa Sugar Co.					48
3	190					47
4	-	-	-	-	-	46
5	2	2	2	2	2	45
6	3	3	3	3	3	44
7	4	4	4	4	4	43
8	5	5	5	5	5	42
9	6	6	6	6	6	41
10	7	7	7	7	7	40
11	1/2	1/2	1/2	1/2	1/2	39
12	1/2	1/2	1/2	1/2	1/2	38
13	Total Days					37
14	Overtime hrs.					36
15						35
16						34
17	LUNA					33
18	Store Account					32
19	1	1	1	1	1	31
20	2	2	2	3	3	30
21	3	5	5	5	10	29
22	23	24	25	26	27	28

aluminum check with his number stamped thereon. He is then consigned to an overseer who furnishes him with a weekly time ticket, as per form A. These tickets are stamped in the office with the date of the last day of the week they represent, and are distributed by the time-keeper on the last day of the preceding week to the overseers, who in turn distribute them to the workingmen. When a man works a full day, the overseer punches his ticket in the evening before he goes home, while the time-keeper on his rounds takes his time from these tickets, counting the number of men present to verify the number of days punched by the overseer.

Each overseer has a different punch mark so that it is easy to keep track of the kind of work on which the men have been employed.

In addition to the time cards, each workman is also supplied with a pay check (as per form B.) This pay check is punched at the end of each week when the overseer collects the weekly tickets, and turns them into the office for entry in the office time-book. The pay check, as punched, is retained by the laborer until he receives his pay, when it is taken over at the office as a receipt for same. This pay check, together with the aluminum check is considered a sufficient identification of the party to whom the wages are due.

Any man losing his pay check or his aluminum check, is fined 50c, not on account of the value of the checks, but in order to prevent their loss, as on a large plantation this frequently gives rise to complications.

The time-book (form C), is made up from the pay checks and from memoranda kept in the cashier's office.

Time Book _____ 1904										Payments.							
Occupation	#	Days Overtime	Days Overtime	Days Overtime	Days Overtime	Days Overtime	Days Overtime	Total Days.	Total Overtime	Rate	Total Earned	Hosp.	Fines	Store	Advance	Paid	Dr. Balance
	2		9	6	6	6	4 ²	25 ²	6 ²	60	58.85	1	50	24 -	2 -	31.35	
	3		9	6	6		5	26		60		1			6 -	53 -	
	4		8	5	3	6		22		50.75		1		12.50		37.25	
	5		5	7	6	4		22		50.75		1	1 -			48.75	
	6		6	5	3	5		19		50	43.85	1		2.35	7 -	33.50	
	7		4	2				6		35	13.85	1		10 -	5 -		2.15
										278.05	6	1.50	48.85	20 -	203.85	2.15	

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EXERCISE.

W .W. Thorne, Sec'y.,

International Accountants' Society, Inc.

Detroit, Mich.

Dear Sir:—

I wish you would outline to me a simple system of accounting for a business, as per the following particulars:

I run a cash and credit retail business, dealing in books, magazines, stationery, news stands, and cigar stands. In my main office, the business covers all these items. In my two branch stores I deal in cigars, magazines and newspapers, and I run two cigar stands in the leading hotels of the city.

I wish to establish a system which will inform me as to how much I make on each particular department of my business, and as to what revenue I derive from the cigar-stands in the hotels, and I would like to be able to obtain this information at any time.

The business at the branches is strictly cash. The only credit business is at the main store. This is principally in relation to magazines and papers delivered and charged for by the month.

One of the cigar-stands at the hotels is run on a profit-sharing basis; the other is under the control of a clerk on a salary.

Please note that I am not a book-keeper and therefore, would very much appreciate your making your explanations as lucid, and your general system as simple as possible.

J. VAUGHAN.

INSTALLMENT XI

Devising Special Systems of Accounts, Adjustments and Diffusion of Expense

The Devising of Special Systems of Accounts

SILVERWARE MANUFACTURING BUSINESS

(253) Like many other manufacturers, the silverware business is not confined to producing a single line of goods. The business may include the manufacture of sterling flat-ware, sterling hollow-ware, hotel goods, and other specialties. It is therefore very important the manufacturer should know accurately his gain or loss of each department of manufacture, as it frequently happens that the department carrying the largest volume of business and using the largest amount of material will realize the smallest average of profit.

In the forms herewith submitted, it is supposed that

Department A stands for sterling hollow ware.

Department B stands for nickel hotel ware.

Department C stands for electro-plated Britannia ware.

Department D stands for leather goods.

Department E stands for jewelry and silverware cases.

Department F stands for outside manufactured goods.

(254) Form 1 represents the summary of the department ledger, illustrating the amount expended on every item connected with the manufacture and sale of goods, the sales themselves, and deductions therefrom, all properly distributed to the various departments, including depreciation written off from plant, tools, etc.

It will be noted that the items capitalized on this statement are the net, or total, debits of each section.

The total gain as shown on the statement will agree with the amount of profit carried to Surplus account in the private ledger.

It will also be noted that the analysis shows that for the year's business 4 departments were profitable and 2 departments unprofitable.

(255) A sample of Daily Time Card is also illustrated.

Employee No. 425 starts work 7:00 a. m. and crosses out figure 7. He works on this first job, rolling tea spoons, until 11:30; he then sweeps up until noon. He crosses 11:30 to indicate a new job, and crosses 12:00 when he stops for the noon hour; and at 1:00 p. m. he starts grading teaspoons, working at this job until he quits at 6:00 p. m. His card thus shows that John Smith put in 9½ hours productive, and ½ hour non-productive labor.

ing to the cost clerk that the job is finished, and he then proceeds to assemble the daily costs so as to make the proper charge to the department for which the work is done.

NO. 475

LABOR CARD

DATE June 30 1902

NAME John Smith

X	5	10	15	20	25	30	35	40	45	50	55	A.M.	5	10	15	20	25	30	35	40	45	50	55	P.M.	5	10	15	20	25	30	35	40	45	50	55
10	5	10	15	20	25	30	35	40	45	50	55	11	5	10	15	20	25	30	35	40	45	50	55	12	5	10	15	20	25	30	35	40	45	50	55
1	5	10	15	20	25	30	35	40	45	50	55	2	5	10	15	20	25	30	35	40	45	50	55	3	5	10	15	20	25	30	35	40	45	50	55
4	5	10	15	20	25	30	35	40	45	50	55	5	5	10	15	20	25	30	35	40	45	50	55	6	5	10	15	20	25	30	35	40	45	50	55

ORDER NO.	QUANTITY	OPERATION	STATE ARTICLE WORKED UPON	TIME	AMOUNT
	150	Pelling	Tipped Tea Spoons	4 1/2	1.12
			Sweeping Floors	1/2	.13
			Grading Tea Spoons	5 -	1.25
				10 -	1.250

RETAIL SHOE STOCK RECORDS.

(257) The following can be recommended as a very good method for keeping record of stock for a retail shoe store:

(258) Stock record cards are made containing the following particulars: Stock Number; Location; High, Low or Normal Supply; Description; Name of Manufacturer and Address; Date of Order and Number of Pairs Ordered; Date Received and Number of Pairs Received; Record of Width and Size, sizes being carried along the card in separate columns the widths being carried down the card. (See illustration.)

STOCK NO.		MATE. NO.		CAT. NO.		DATE		NO. OF PAIRS ORDERED		DATE		NO. OF PAIRS RECEIVED			
DESCRIPTION															
MANUFACTURER						ADDRESS									
WIDTH	SIZE	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2
AA															
A															
B															

It will be seen that a separate card is made out for each kind of shoe carried and that this card takes care of all the shoes of that kind of every width and size. It might be desirable to sub-divide this card, if the quantities are

very large and the different sizes or widths were located in different receptacles.

On the card above described new consignments received are indicated by making a short vertical line in the different spaces. In a large business it would be better to have separate cards with guide tabs for either each width, or each size and proper arrangement for recording quantities received, sold and on hand.

In each box or other receptacle a slip should be placed on which should be entered the stock number of the shoe and the quantity on hand. When a sale is made, it is entered on this slip so that this slip should always correspond with the stock record and makes a very good check on same, as at the end of the day the slips are assembled and a comparison made with the sales tickets.

By means of a system of stock record of this kind, it can be seen that the very closest kind of supervision on the stock can be obtained by the management.

In these days of up-to-date accounting and improved methods, it is almost universal for every manager, wholesaler, jobber or retailer to desire to be in a position where he can obtain a daily inventory, or at all events, an inventory whenever desired, and this can only be furnished by methods such as we have here described.

CONSIGNMENT RECORDS.
QUESTION

(259) I enclose you copies of forms used in this business and desire to ask for your suggestion in regard to any improvements that will tend to shorten clerical labor connected with the system.

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Merchandise Consigned.												1905 Book 5				
For the month of			January													
Date	Folio	Description	Ledger Totals	Total	Price	Jewelry	Watches	Silverware Clocks	Materials	Cut Glass	CHARGED			RETURNED		
											Date	Folio	Amount	Date	Folio	Amount
Jan 2	129	3 Gold Watches		75.00	25.00		75.00				1 10	2	50.00	1 10	5	25.00
		1/2 doz chains		6.00	12.00	6.00					" "	2	4.00	" "	5	2.00
		3 Cut Glass Dishes	42.00	12.00	4.00					12.00	" "	2	8.00	" "	5	4.00
		Jno. Smith														
		Olney, N. Y.														
5	129	John Doe														
		Bulaski, N. Y.														
		3 N. E. Watches		3.75	1.25		3.75				1 19	2	2.50	1 19	5	1.25
		1/2 Doz 1847 Knives	7.25	3.50	7.00			3.50			" "	" "	1.75	" "	5	1.75
			1100.25	100.25		6.00	78.75	3.50		12.00			66.25			34.00

All goods are charged on the Consignment Book and itemized and carried to a column for the department. When these goods are charged they are posted to the Consignment Ledger, as you will see by drawing. When they are reported on, the goods that the customer wishes to return are again

itemized in the return book and amount carried out in column, and this is also posted on credit side of Consignment Ledger in the returned column. Then the goods that he wishes to keep are charged up in "book 19," as shown in drawing, itemized and extended, which also is posted as a credit in Consignment Ledger and extended in "Charged" columns. This,

Jan'y.		Merchandise Charged from Consignment								Book 19			
1905	F.	Description	Price	Jewelry	Watches	Silver- Ware	Material	Cut Glass	Totals	LEDGERS			
										NEW YORK	SUNDY	RETAIL	TERMS
Jan'y 10	129	John Smith											
		Clear, N.Y.											
		2 Gold Watches	25 00		50 00				50 00				
		4 Chains Dz.	12 00	4 00					4 00				
		2 Cut Glass Dishes	4 00					8 00	8 00	62 00			
		memo'ls-139											
19	129	John Doe											
		Pulaski, N.Y.											
		2 N.E. Watches	1 25		2 50				2 50				
		1/4 Doz. 1847 Knives	7 00			1 75			1 75	4 25			
		memo'ls-129											
				4 00	52 50	1 75		8 00	66 25	66 25			

at a glance on the ledger tells us how much is kept and how much returned of that Consignment shipped. This "book 19" is also used as a charge book to the Sales Ledger, either New York Ledger, Sundry Ledger, or Retail Ledger, and as a debit journal for the Individual Ledgers.

The Trial Balance of the Consignment Ledger is taken or arrived at by taking the total goods consigned as the debit, and the goods returned and goods charged as the credit.

John Smith															129	
Olean, N.Y.																
1905	Book	Folio	Goods	ck	Charges	Total Charges	Balance	Total Credits	Charged	Returned	ck	Date	Book	Folio	Date of Memo	Remarks
Jan'y	2	5	139	W	1	75.00				31.00	1	Jan 10	9	5	Jan 2	
	2	5	"	J	1	6.00			62.00		1	10	19	2	"	
	2	5	"	C.G.	1	12.00	93.00	0	93.00							
John Doe															Pylaski, N.Y.	
1905																
Jan'y	5	5	139	W		3.75				3.00		Jan 19	9	5	Jan 5	
	5	5	"	S		3.50	7.25	0	7.25	4.25		"	19	2	"	

You will also notice that when goods are returned or charged, they are marked off on the Consignment book at the right hand side, so that if a customer did not report on all goods consigned, it would be very easy to make an itemized invoice of balance of goods still out on memorandum.

This seems an extremely lengthy way of arriving at the total sales of each department, and I am very anxious to change this.

Merchandise Returned										5
Book 9										
January 1905										
Jan	10	129	John Smith							
			Qlean, N.Y.							
			1 Gold Watch				25	00		
			2 Chains		1	00	2	00		
			1 Cut Glass Dish				4	00	31	00
			memo Jan 2-139							
	19		John Doe							
			Pulaski, N.Y.							
			1 N.E. Watch				1	25		
			1/4 Doz. 1847 Knives		7	00	1	75	3	00
			memo Jan 5-139							
									34	00

I ask you to carefully examine this, and if you can in any manner offer me any suggestions, I will be glad to receive them.

ANSWER

We have received your favor and are very glad to have an opportunity to discuss the best method of recording the transactions of a consignment business. Many differing requirements are naturally met with in the various lines of trade, but generally speaking, we can lay down broad principles which with proper modifications, can be adapted to most of them.

In your case, we judge the consignments are usually small, as per examples you furnish, and your present method is undoubtedly efficient and accomplishes the desired end, i. e., a record of consignments, disposition of same, and charges properly made against consignees; but your method involves considerable duplication which should be avoided.

(260) (a) When merchandise is consigned, full particulars are entered in the Merchandise Consigned Book. When consignments are reported sold, or part sold and part returned, the disposition is entered in the Merchandise Consigned Book in special columns provided therefor.

(261) Posting is made from this Merchandise Consigned Book to the consignee's ledger accounts when the consignments are made. Returns are itemized in the special Merchandise Return Book, and the amount posted from thence to the credit of the consignee's Ledger account.

(262) (b) When consignee's report of sales is received, it is itemized in the Consignment Sales book.

Columns are provided in this Sales book for distribution to New York sundry and retail ledgers.

(263) (c) The ledger is ruled with special "credit" columns headed

“Charged” and “Returned;” cash receipts being posted in the “Charged” column, and returns dealt with as previously described.

The weak point of this system is the “sales” or “charge” record, which appears to be wholly unnecessary if a proper re-arrangement of the plan be made.

Use either a loose-leaf or card system for a combination Consigned Stock and Sales Record. This form to be ruled practically the same as your present Merchandise Consigned book.

Do not post to consignee’s Ledger account until his report of sales has been received, but carry the record of consignments as part of your inventory on hand at points outside of your store. Up to this time the consignment record is therefore memorandum.

When report is received from consignee, enter particulars of sales and returns in the “Charged” and “Returned” columns, and post from the “charged” column to the ledger accounts.

It is entirely unnecessary to again itemize the sales, because each lot of goods will be accounted for on the same line as that on which the original particulars were entered (of course, only one leaf or card will be used for the record of each consignment.)

The returns need not be posted to consignee’s Ledger account at all, they are simply taken out of the consignment inventory and replaced in the regular inventory, the consignment record furnishing full particulars of the transaction.

This method will also do away with the “Charged” and “Returned” columns in the ledger, as only one credit column will be necessary in which to enter settlements by consignee for goods sold by him for your account.

(264) The distribution to different ledgers will be accomplished by placing the cards or loose-leaves relating to each ledger in different sections, providing proper guide cards and recapitulation of each section will be necessary for the purpose of proving each ledger separately.

SALES SLIPS IN A DEPARTMENT STORE.

(265) When the day’s sales slips are received at the office they are arranged alphabetically and entered on the customer’s bill, a carbon copy being made at the same time. At the end of the month the top is torn off and mailed, the duplicates being filed alphabetically in a binder, from which the totals are posted to the ledger.

After billing, the slips are entered on a sheet—the department and sales number, the amount and the total for each party extended. These amounts are checked with the amounts on the roll from the Fisher machine, representing the amount on each bill, the totals of which must agree, any discrepancy being at once located.

The slips and sheets are then submitted to the auditing department,

where they are sorted and listed by departments, totaled on the adding machine and checked. They can then be filed away for future reference. It is obvious that it is necessary to handle one day's charges on the following day, except on the last day of the month, when two days' sales are billed.

Credits for goods returned, allowances for damage, etc., are billed the same way, but posted in full to the ledger each day, the total being carried into the credit column when the charge is posted. Cash is posted daily directly from the cash book.

In sending out the bills, those for parties whose account shows no unpaid balance have been previously checked, and are mailed at once, while to the others the account rendered as shown by the ledger, is added.

By footing the daily total charges and credits, a check is obtained with the figures of the auditing department and of the cashier.

STEAMBOAT TRAFFIC.

(266) The following information was suggested by a previous article on accounting methods for the transportation business included in lesson 8.

In taking care of the passenger traffic of our lake steamers the clerk of the boat usually performs the clerical work for each boat, but in the system which I wish to suggest all accounting is done in the main office, where it should be. By this system the only chance that the clerk has for "knocking down" is from cash fares.

Each port has an agent. At the opening of navigation each agent is provided with a certain number of serial tickets liable to be used during the season, special forms being provided as needed from time to time.

When tickets are sent to an agent a record is kept at the main office by charging the agent with the tickets, not in dollars and cents, but as so many tickets of each kind. A receipt is also required from the agent upon receipt of the tickets.

Local ticket sales are accounted for on weekly report sheets, giving name of port with columns for each form of ticket. These columns will be headed "highest number on hand," "commencing number," "closing number," "number sold," "rate," and "amount."

Coupon ticket sales are accounted for on another form with headings substantially as follows: "Destination," "form number," "class," "highest number on hand," "commencing number," "closing number," "number sold," "rate," and "amount."

Upon receipt of tickets from the main office the agent puts in the "highest number on hand" column, highest number of each form received and at the end of the week the reports when forwarded to the main office should show number sold of each form, amount, and balance on hand, enclosing a remittance to cover amount sold. The difference between the closing number one week (which is the commencing number of the week that follows

it) and the closing number of the next week, is the number of tickets sold in the current week.

A summary of sales of all classes constitutes the charges against the agents for the week.

The weekly report sheets when first received at the main office are written up in what is called the proportionment book, charging each agent with the total amount of his sales for the week. Credits being given for coupon tickets, according to the different lines over which tickets were issued, and the line's proportion of coupon tickets, together with local tickets, to passenger earnings account.

These statements are afterwards filed away in loose leaf binders (a separate binder being used for each agent), first comparing the present week with the previous week's report to see whether serial numbers are properly accounted for.

The clerk of the boat simply acts as a conductor, collecting the tickets and giving receipts for cash fares, enclosing the collections for each trip in envelopes, which are handed in to the main office and opened by the estimating clerk. Each trip is thus estimated by the estimating clerk, who enters the estimates in the estimating or trip book, which will give the earnings of each trip for the different steamers operated by the company, the totals of which should agree approximately with the passenger earnings account in the general ledger. The only posting made from this book to the general books is the line's proportion for all coupon tickets collected by the clerk and included in his trip collections. A bill for which is made out and forwarded, together with the ticket to the issuing line, posting the amount to the debit of the issuing line's account in the coupon ledger.

All cash fares are credited to passenger earnings account through the cash book.

Spoiled tickets should be returned to the main office for credit; also the tickets remaining unsold at close of navigation, as each agent is held accountable for all tickets received.

The passenger earnings, cash, foreign and local, are credited to one account in the general ledger, while the totals as shown in the estimate book will give the passenger earnings for each steamer.

After estimating a trip the tickets are sorted and checked against the agent's reports of sales, so that at the close of the season, tickets on file should agree with numbers issued by each agent, providing all tickets sold were used.

Settlements for foreign or coupon tickets are made according to the debit or credit balances as shown by the respective accounts in the coupon ledger.

COAL AND ROCK.

(268) In a coal mine a six foot section is struck, 4 feet of which is a vein of coal and 2 feet a vein of rock. To mine this coal it is necessary to make a 6-foot heading and this necessitates taking out 2 feet of rock.

Two sets of men are employed one gang taking out rock and the other coal. It is evident that, if at the end of the month the rock men are, say 50 feet further advanced, this 50 feet of rock will be part of the charges for coal for the next month, in other words, this 50 feet of rock, even though an expense item, is charged for the time being as a plant item, and the next month this plant item is wiped out and this 50 feet is charged to Coal Mining.

ACCRUED INTEREST.

(269) A very usual adjustment is the debiting of interest on mortgage accrued, but not due, and crediting an accrued interest account. The first item is included in the profit and loss account as a charge and is off-set on the balance sheet by the inclusion of the amount of the liability.

When the interest becomes due the accrued interest account is charged on the voucher in payment or, if you should be interested in bonds, a journal entry would be made charging accrued interest and crediting coupon account, this being in turn charged as the interest is paid.

UNCOMPLETED VOYAGES.

(270) In the coal business an example of adjustment may be quoted where a fleet of barges or schooners are maintained and where it is necessary to estimate the value of an uncompleted voyage.

The value is arrived at by crediting the vessel with the number of days she has been on the round trip, the rate per day being arrived at by taking the average time for the season of the year between the ports and dividing by the Charter rate. The entry would be as follows:

Provision Acct.	Freight Earned Acct.
-----------------	----------------------

ACCRUED WAGES AND UNEARNED COMMISSIONS.

(271) In the publishing business there are usually a number of uncompleted jobs on hand, and in some cases the operators are paid monthly. There are also a number of agents to whom commission is payable but not due, i. e., publications are sold on the installment plan and the commission is only payable as the installments are received from the purchaser.

All expense and operating accounts, therefor are headed with the current year, such as "Press Room Wages, 1903," "Commission, 1903," etc. At the end of the year, pay-roll is figured up from latest pay to last day of year and the following journal entry made:

Press-room Wages, 1903	\$1,786 92	
Press-room Wages, 1904		\$1,786 92

(Unpaid wages, 12/21 to 12/31, '03, inclusive.)		
Commission, 1904	287 50	
Commission, 1903		287 50
(Advances: Rugby	\$ 50 00	
Whitson	100 00	
Campbell	137 50)	

And so on, a dozen or more such entries being made to adjust the different accounts. This method gives each year its correct showing as to profit and has the merit of simplicity. In this statement the above would be shown as a liability. "Unpaid wages \$1,786.92," and an asset "Advanced Commission \$287.50." No further adjusting entries are necessary. On pay day "Press Room Wages, 1904" is debited wth the full two weeks' pay-roll, but having already been credited with the portion owing in 1903, the 1904 account gets a net charge of only what belongs in that year.

LIABILITY INSURANCE.

(272) It is a common transaction for a firm to buy a Liability Insurance Company policy, the premium being based on the estimated pay-roll for three years and the premium payable: 50% 1st year, 30% 2nd year, 20% 3rd year, and a pro-rata adjustment to be made at the end of each year on the actual amount of wages expended. Most firms charge this premium to expense, perhaps extending it over the year. This is not just, as the premium paid practically is for 18 months, but to extend it over 18 months is still worse. A special Liability account should be opened, charge it with amount paid for premium, and credit with percentage on monthly pay-roll, transferring such proportion to expense. In this way the expense is accurately distributed.

Estimated pay-roll, 3 years, \$10,000, rate, \$1.00 for each \$100 of pay-roll, premium \$100, payable \$50 1st, \$30 2nd and \$20 3rd year

1904.					
LIABILITY ACCOUNT.					
Jan. 1.	Premium.	50.00	Feb. Pay Roll \$1,000.	Premium	10.00
			March Pay Roll \$2,000.	Premium	20.00
			April Shut down.		....
			May Strike.		....
			June Pay Roll \$3,000.	Premium	30.00

By the above method a correct adjustment of the account can be ascertained.

DISCOUNT ON LOANS.

(273) The Loans Unexpired account of a bill broker is subject to very careful adjustment when closing the books for any financial period.

When the notes are discounted the amount of the discount is entered in a special column in the cash book on the credit side. The total of this column is posted at the end of each month to "Interest on Loans Unexpired" account in ledger.

There is another book called "Interest on Loans." This book has its pages divided into 12 columns running across two pages, one column for

each month of the year. Each separate discount is distributed to the month during which it is to be charged off in the monthly report, thus: Supposing notes for \$15,000 dated March 15th, due August 5th, were discounted March 15th, making 143 days' discount, equal at 6% to \$357.50. There would only be 16 days' discount in the column for March and 5 days' discount in the column for August.

At the end of the month, when the statements are made up, the amount of the column for that particular month is included as an item of revenue. "Interest on Loans" is then debited and "Interest on Loans Unexpired" credited for the amount through the journal, so that the amount of unexpired interest can always be ascertained without any trouble.

UNEXPIRED INSURANCE.

(274) In one concern where considerable insurance on rolling stock is carried, the plan is to keep a Pro-rata or Equalization book. This book is ruled with columns for each month, and when a payment is made to the insurance company, it is immediately distributed over the year in the Equalization book. At the close of each month, when making out statements, the particular column in the Equalization book is footed and the amount charged to Equalization account through the voucher register. The balance of the premiums unexpired being carried as assets.

ACCOUNTS AND BILLS RECEIVABLE AND PAYABLE.

(275) The following is the method of adjustment of uncompleted contracts, and accounts and bills receivable and payable, adopted by a large concern in New York:

In closing our books for the last year we examined carefully the standing of each Customer's account and made an estimate of possible loss on same, keeping a memorandum of names and amounts allowed to cover such possible loss. We also gave Bill Rec. the same treatment. We then figured interest due and unpaid on Accts. Pay. and Bills Pay. We also examined the "Unpaid Bills" file and figured the total amount due. We then examined our Contract Book and found that we had undelivered contracts charged to customers to the amount of \$500.00. We then made the following Journal entry:

Merchandise,	\$24,667	
To Suspense.		\$24,667
Unpaid Bills,	\$3,000	
Mdse. Charged and not delivered,	500	
Interest due and unpaid,	1,400	
Allowances on notes that may die,	5,600	
Allowances on accounts that may die,	14,167	
	<hr/>	
	\$24,667	

We then entered the Inventory in Mdse. account, and carried the bal.

ance to P. & L. We then brought down the Inventory to start Mdse. account for new year and made an inventory in the Journal as follows :

Suspense,	\$24,667	
To Mdse.		\$24,667

The method of closing into Merchandise account is not up-to-date. As indicated in previous lessons, adjustments of this kind should be made by means of a special Adjustment account.

DEPARTMENT STORE ADVERTISING.

(276) In a large department store the following method is adopted to adjust the advertising account :

This account is charged with the cost of advertising several different lines of merchandise, extending over a number of months.

Each month this account is credited with the actual amount of advertising used and advertising expense of the several lines charged. A company giving premiums with merchandise as an advertising scheme, pursues the following method of arriving at results :

1st. The articles sold have coupons attached. 2nd. Each coupon has a value attached to it. 3rd. These coupons are interchangeable between all commodities. All premiums purchased for use under this plan are charged to a Premium Purchase Account.

The value of all coupons attached to goods shipped during the month are charged to advertising expenses and credited to a coupon reserve account.

To adjust these accounts at the end of each month, coupon reserve account is charged and premium purchase account credited with actual coupons redeemed during month. The balance of the coupon reserve account shows company's liability on coupons and balance of premium purchase account shows amount of goods on hand.

COST LEDGERS.

(277) A very good plan of keeping Cost Ledger accounts has been adopted by a machine manufacturing company who use an order blank in duplicate on which to enter sales orders. The back of the duplicate is ruled for the Cost Ledger account of the customer for whom the work is to be done with headings as follows :

LABOR RECORD.

Date, Item, Class of Work, Number of Hours, Rate, Amount.

MATERIAL RECORD.

Date, Item, Weight or Number, Price, Stores, Raw Material, Supplies, Rough, Finished, Complete.

SUMMARY.

Recapitulation as above, Total Estimated Factory Expense, Total First Cost, Estimates Selling Expense, Total Cost.

(278) In another case the actual amount of certain materials entering into the composition of the product and the actual cost of same is kept secret. The cost is estimated by cubic measurements and sundry computations. A third copy of the sales order is used as a private manufacturing record, being ruled to contain on one side the estimated costs, and on the other the actual costs, thus constituting an extremely valuable record.

This idea might be adapted in very many ways, as will probably be at once apparent to the reader.

DIFFUSION OF GENERAL EXPENSE.

(279) The question as to the proper disposition of general or administrative expense in a manufacturing establishment is one in regard to which considerable diversity of opinion exists.

We consider that these expenses should not be diffused over productive labor as in the case of factory expense, but a percentage based on productive labor is extremely useful for the purpose of fixing a remunerative selling price.

For the information of our readers, we append an extract from an article discussing this subject in relation to the lumber business, together with a detailed Cost Sheet showing the executive expense directly added to cost of production. As above indicated, we consider this incorrect, and that nothing should enter into actual cost of production except those items concerned in the manufacture of the product.

To be intelligent, a cost sheet should be divided into several parts, one for each department, such as logging department, milling department and sales department. But it is also necessary to go further and subdivide until each operation stands by itself. Then and not until then can the manufacturer watch and regulate his expense of operation. He can then determine readily where the trouble is when his costs for a certain month exceed the average and can take steps to remedy the difficulty at once. We cannot apply any fixed rules for the guidance of all. Each manufacturer must arrange this sub-division according to the class and volume of his output.

It is found by experience also that in order to be sure of comprising in this cost sheet all of the items that should enter into the cost of the product, it is necessary to have a regular form which calls for certain specified information; then no item can be overlooked or forgotten in the monthly cost sheet—for a cost sheet which is not figured every month at least will not be of much use in assisting to regulate expenses and point out the necessary economies. In enumerating the items which should appear on this cost sheet form, it is not necessary to mention those of the log cutting, hauling to the road, loading on cars, hauling to mill, or operating the saw mill, kilns, and planing mill, or the expense of handling on the yard, and of loading the

DETAILED COST OF OPERATING PLANT AT

FOR MONTH OF

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ACCOUNTS	FEET B. M.	AMOUNTS.	Cost Per M.	Total Amounts.	Total cost Per M.	Grand Total Cost Per M.	Cost by Depts.
LOGGING DEPARTMENT.							
1. Log Cutting.							
2. Company Stocking.							
3. Contract Logs (From own timber).							
4. Contract Logs (Bought).							
5. Feed.							
6. Loading Logs—Oprtg Loader.							
7. Loading Logs—Repairs and Supplies.							
8. Railroad Operations—Oprtg Trains.							
9. " " Fuel and Oil.							
10. " " Repairs to R. S.							
11. " " Repairs to M. P.							
12. " " Maintenance of Way.							
13. " " Bldg. Spur Tracks. (Av. for 190).							
14. Proportion Executive Salaries.							
15.							
16.							
17.							
Total cost of logging—per M feet.							\$
MILLING DEPARTMENT.							
1. Saw Mill Oprtns—Unloading of Log Cars.							
2. " " Pond Expense.							
3. " " Oprt. Mill (Labor and Watchmen).							
4. " " Repairs and Supplies.							
5. Sorting Lumber—On Docks.							
6. Piling Lumber—On Yards.							
7. Stacking Lumber—For Kilns.							
8. Dry Kilns—Firing.							
9. Dry Kilns—Repairs and Supplies.							
10. Planing Mill—Taking Lbr. Kilns to P. M.							
11. " " Oprtg. P. M. (Labor and Watchmen).							
12. " " Tying—Storing—Loading.							
13. " " Repairs and Supplies.							
14. Timber Surfacing (Labor, Oils and Supplies).							
15. Shipping (Except from P. M.).							
16. Switching in Yards (Including Fuel and Oil).							
17. Telephone and Electric Light Expense.							
18. Mill—Office Expense.							
19. Proportion Executive Salaries.							
20.							
21.							
22.							
Total cost of Milling—per M feet.							\$
SALES DEPARTMENT.							
1. Office Expense.							
2. Salaries.							
3. Telegrams and Telephones.							
4. Stationery.							
5. Stamps (Average).							
6. Advertising.							
7. Traveling Expense.							
8. Traveling Salesmen.							
9. Commissions (Average for 190).							
10.							
11.							
12.							
Total cost for selling—per M feet.							\$
FIXED CHARGES.							
1. Construction of Main Line of R. R.							
2. Trade Discounts.							
3. Insurance.							
4. Taxes (Other than on Timber Lands).							
5. Depreciation of Bldgs. and Plant).							
6. Depreciation (Of R. S., M. P., & R. R.).							
7. Interest on Investment (Except Timber).							
8.							
9.							
10.							
STUMPAGE.							
Total cost of fixed charges—per M feet.							\$
MISCELLANEOUS.							
1. Association Dues and Assessments.							
2.							
3.							
Total miscellaneous—per M feet.							
TOTALS.							

finished product on cars for shipment. These items will appear on the pay roll, and may each month be charged on the ledger, and the items of supplies, such as oil and fuel, and of repairs will also find their way to the general ledger account from the various books of original entry.

ACTUAL COSTS.		Feet B. M.	Amount.	Cost Per M.	Total Amount	Total Cost per M
1. Branch Roads.						
2. Sorting.						
3. Stacking.						
4. Piling.						
5. Dry Kilns.						
6. Planing Mill—Lumber Kilns to P. M.						
7. " " Operating P. M.						
8. " " Tying, Storing, Loading.						
9. " " Repairs and Supplies.						
10. Shipping (Except from P. M.)						
11. Sales Dept.						
12. Commissions.						
13. Total Cost of Selling.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						

PROCEEDS—NET AVERAGE.		Unit.	Quantity.	Amount.	Net Per Unit	Cost Per Unit.
1. Lumber.						
2. "						
3. "						
4. "						
5. "						
6. Lath No. 1.						
7. " "						
8. Lath No. 2.						
9. " "						
10. Sawdust.						
11. Spools.						
12. Shingles.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						

SUMMARY OF MONTH'S WORK.		Feet.
1. Logs Cut.		"
2. Logs Hauled.		"
3. Logs Hauled (Contract).		"
4. Logs Bought.		"
5. Logs Hauled by R. R.		"
6. Logs on R. R.	1st, 190.	"
7. Logs in Woods		"
8. Mill Cut.	Logs.	Feet.
9. P. M. Cut.		
10.		
11. Lath Made.		
12. Spools Made.		
13. Shingles Made.		
14. Sawdust Shipped.		
15.		
16.		
17.		
18.		
19.		

MONTHLY DETAILS OF COSTS.		PLANT.	
SUMMARY.		190	
COSTS:		Per M Feet.	
Logging Department		\$	
Milling		\$	
Sales		\$	
Miscellaneous "		\$	
Fixed Charges		\$	
Total		\$	
PROCEEDS:			
Lumber, Per M Feet		\$	
Lath, No. 1, Per M		\$	
Lath, No. 2, Per M		\$	
Shingles, Per M		\$	
Spools, Per M		\$	
		\$	
		\$	
		\$	

But there are certain fixed charges which do not appear on the books in the course of every month's business, and must therefore be handled in the form of monthly average charges, to be arrived at by dividing the annual total of such items by the total number of feet produced. Because these

items do not appear each month and may therefore be easily overlooked, it is most important that they should be printed into the regular cost sheet form. It may be said that it is sufficient to consider such items at the end of the year when taking off a final balance sheet, but then the annual cost sheets will not balance with the monthly sheets, and therefore the monthly sheets will not have represented the actual conditions from month to month as they are intended to; and if they do not represent the actual conditions it would be as well not to get them up at all. And if these items are not considered even in the annual cost sheet, there will be found to be a very large difference between the profit which appears to have been made from month to month, and the profits the books will show at the end of the year.

Among the items of this class most frequently overlooked, I have found the following: Main line railroad construction, spur lines, taxes, insurance, executive salaries, interest on the investment, and depreciation of plant and railroad equipment. A moment's reflection will teach you who have not considered some one or all of these items, that each and every one of them bears exactly the same relation to the cost of production, as does the expense of cutting logs or of operating saw mill. It will also be apparent that the proper proportion of these items should be considered every month in order that the manufactured product may bear its full and just proportion of the total expense incurred in operating the business, and further, in order that the monthly cost sheet may be a reliable guide to the owner in making his prices for the ensuing month. Of these I would call especial attention to the items of selling expenses, of depreciation, of main line railroad construction and of interest on investment (other than timber), as being most frequently overlooked in getting up what might otherwise be a comprehensive and complete cost sheet.

To show what it means to omit any of these items, or all of them, I have gotten up what might be termed an average cost sheet based upon cost sheets from a number of mills, and an abstract of such charges will no doubt be of interest. The item of selling expense should contain the expense of maintaining the office, the proportion of salaries properly chargeable to selling cost, stationery, stamps, telegrams, telephones and advertising. The figures are as follows:

Selling Expense	\$0 45
Cost of Salesmen or Commissions	30
Main Line Construction	25
Trade Discounts	10
Insurance	20
Taxes	5
Total	\$1 35

And when to this is added the item of depreciation, based upon an average operation producing twenty million feet, with two hundred millions

back of the mill, which we figure to be about 45 cents, we have a total of \$1.80. This is certainly a very considerable item; even if it were but half as much, it might very easily, if overlooked, wipe out almost the entire profit, when lumber is selling as it has been for the past year.

The item of the depreciation, and the methods to be employed in figuring it into the cost are worthy of special discussion. As this is to be figured upon the entire investment, excluding only the timber holdings, the valuation should comprise saw mill, planing mill, dry kilns, machine shops, run ways, water works, light plant, telephone lines, live stock, wagons and logging tools, logging cars, log loaders, locomotives, rails and spikes. I wish to state here that the rents received for operative houses at both mills and camps should take care of their own depreciation and interest.

Bringing all of these items into the total valuation I find that the average investment per million feet of lumber cut appears to be about \$6,000 for a plant cutting from ten to twenty millions of feet per annum (exclusive of cost of operative's houses). This proportion decreases with an increased production. In arriving at this figure, I assume that the mill is hauling its logs ten to twenty miles.

Proceeding, we will take a timber holding of 100,000,000 feet; to manufacture this into lumber at the rate of ten million feet per annum, we have found will require an expenditure or investment of about \$60,000 for a plant. We are now in a position to figure our depreciation; we have a plant valued at \$60,000, and 100,000,000 feet of timber back of it. We have first to consider what we are likely to realize from a sale of our plant when we have cut out the timber; an investigation appears to indicate that we may figure upon 25 per cent of the original cost as representing this salvage. We therefore must so adjust our depreciation account that it will take care of the balance, or \$45,000, by the time our 100,000,000 feet of timber is exhausted. Dividing this 100,000,000 feet into the \$45,000 gives us 45 cents which must be charged off for every thousand feet cut by this mill in order that the investment may be taken care of by the time we have finished the operation.

This amount will of course vary with greater production, and with larger bodies of timber, but the principle remains the same.

EXERCISES

1.

From the following trial balance of the Excelsior Ribbon Company, prepare trading and profit and loss accounts for the six months ending June 30, 1904, and balance sheet for that date:

Capital Stock—	
Preferred, 250 shares at \$100	\$ 25,000 00
Common, 300 shares at \$100	30,000 00
Machinery	\$ 24,500 00

Inventory, Dec. 31, 1903.....	78,620	15	
Accounts receivable	63,428	30	
Materials purchased—			
Silk (raw, spun and thrown)	124,326	80	
Ribbon paper, boxes, labels, etc.	3,728	05	
Labor—			
Weaving	29,384	07	
Throwing	10,976	25	
Dyeing	8,563	43	
Warping, winding, etc.	15,721	18	
Fixing and preparing looms	1,270	60	
Sales of ribbon, less returns			265,123 74
Sales miscellaneous			2,507 26
Discounts on purchases			120 56
Profit and loss—surplus—Dec. 31, 1903.....			23,528 74
General expenses—			
Salaries, officers and clerks	5,238	75	
Engineers, etc.	2,068	17	
Rent of mill	2,500	00	
Commissions	17,856	50	
Fuel, lightning, etc.	2,370	60	
Other expenses (including ins., \$285)	7,650	39	
Bills payable			57,235 95
Interest on bills payable	1,586	36	
Accounts payable			6,875 95
Cash in bank	9,876	25	
Cash in safe	726	35	
	<u>\$410,392</u>	<u>20</u>	<u>\$410,392 20</u>

In your statements provide for the following: Dividends declared at the rate of $3\frac{1}{2}$ per cent on preferred stock and 3 per cent on common stock; depreciation on machinery, 15 per cent; prepaid insurance, \$48.25; labor accrued but not due (estimated), \$1,850; taxes accrued but not due (estimated), \$250; inventory, June 30, 1904, \$96,385.50.

2.

What is usually included in the account "organization expenses" in the books of a company? How should this account be treated? Give reasons.

3.

A reserve fund of \$250,000 has been set aside out of the profits of a company and invested in government securities at par. How should the fund and investment appear on the balance sheet of the company (a) if the value has increased, (b) if the value has decreased? Give reasons for your answer.

4.

In a manufacturing business it is suspected that the wages paid in one particular department vary from month to month a great deal more than they should if conditions were normal. State how you would ascertain the percentage of the variation and the cause.

5.

A company of bicycle manufacturers make up its accounts on Dec. 31,

1903, for the year. The following are the debits to the trading and profit and loss accounts:

Raw material on hand, January 1, 1903.....	\$12,500
Finished machines on hand, January 1, 1904; 1600 at \$30.....	48,000
Purchases of material	62,500
Labor productive	62,500
Manufacturing expenses: coal, repairs, unproductive labor, etc.....	23,000
Agents' commissions	90,000
Branch expenses, rents, salaries, etc.	40,000
Selling expenses, travelers' salaries, discounts, rebates, etc.....	30,000
Bad debts	8,000
Depreciation of machinery and plant	5,500

The sales for the year were 6,000 wheels, yielding \$540,000.00. The raw materials on Dec. 31, 1903, taken at cost, was \$4,000.00, and the finished wheels in stock ready for sale numbered 800. Prepare an account from the above showing; (a) number of wheels manufactured; (b) the cost per wheel; (c) the gross manufacturing profit; (d) the final net result, including in the trading account the stock of finished wheels on hand December 31, at their cost as shown by the accounts.

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INSTALLMENT XII. AUDITING

AUDITING.

Text Books Referred to:

American Business and Accounting Encyclopædia—(A. B. & A. E.),
Science and Practice of Auditing.

GENERAL AUDITING PROGRAM.

(289) The following has been officially published as a general auditing program, to be used by accountants as a reference guide when arranging the plan of work to be done in auditing books of businesses of various kinds.

This program is very complete, and we have nothing to add except that it will not be found necessary to endeavor to carry out this program in its entirety, but it is formulated with a view to covering every possible eventuality.

PRELIMINARIES.

List of books used. Audit note-book and its use; printed (or written) instruction for auditors' clerks. Books and papers of business under audit; articles and minutes of stock company; general system of book-keeping; manner of making payments; plan of checking; custom as to vouching, board of directors, account committee, etc.; treatment of items in cash book, bank pass book and vouchers; unusual payments or receipts; wages and petty cash payments; custom as to balancing and posting cash book; branch establishments, returns of work, accounts and expenses; treatment of day books, sales books, purchase books; invoices, as to quantities and prices; proving the journalizing; bill books, renewed or dishonored bills, securities if any; checking postings; transfers, through journal or otherwise; division of expenditures; capital stock register as to amounts received and postings, transfers, subscribed and paid up capital, arrears; mortgages; debenture bonds, amounts to be verified; inventories or stock sheets; general stock account; prices on goods finished or in progress; custom as to verification of stock returns; wear and tear and depreciation; short leases; expenditure on capital account; new works, replacements; conveyance deeds and securities; balances and securities at bankers; cash, bills and other securities in hand.

OBJECT OF AUDIT AND METHODS OF PROCEDURE.

Fraud; technical errors; incorrect principles; mere agreement of balance sheet with the books not sufficient; examination of books necessary; limit

as to detail; cash book; checking; private ledger; thorough knowledge of the uses and possible abuses of each book used; search for weak points; scrutiny of contracts and other documents. Continuous audit; advantages; possible dangers; special check or "tick." Completed audit; custody of the books and vouchers; prompt completion of each branch of audit; checking ledger balances and addition of such balances at same sitting.

WORK PRECEDING TRIAL BALANCE.

Calling back postings; nature of transactions revealed; cash book; advantages of careful checking; uncertain or illegible figures; corrections; erasures; necessity of good light; clear enunciation by "caller." Checking additions; private ledger; cash book, petty cash book, bill books; wages book; amounts carried forward; columnar books.

LAST PRECEDING BALANCE SHEET.

Comparison with opening ledger balances; verification as to statement of assets and liabilities; close scrutiny of figures for plant, capital stock, etc.

VOUCHERS.

Receipts; entries in cash book; receipt book stubs; numbered receipts and stubs; two accounts paid together; need of fixed rule; irregularities in terms of credit; communication with client's customers; firms sending their own forms of receipts with payments; date agreement of cash book entries and receipts; cash sales; system of internal check.

PAYMENTS.

System of recording; checks; receipts; insurance premiums. Petty cash. Inspection of vouchers, or certification by responsible person; restrictions on petty cashier.

WAGES.

Frequent source of fraud; difficulties; system of payment; safeguards; wages books added and checked one week against another.

BANK ACCOUNT.

Deposits checked with pass book and duplicate deposit slip noting items and names; reconciliation with cash book; bank balance and pass book personally verified by auditor; cash in hand; tickets or I. O. U's. Auditor's identification marks.

BILLS PAYABLE, ETC.

Bill books; paid notes and acceptances returned; ledger account. Bills receivable; treatment by auditor; matured or discounted bills traced to cash book and those dishonored to debit of customer; verification of bills in hand; deductions for discount; liability on bills under discount; the ledger account.

CONSIGNMENTS.

Checking; letter files, copy books, accounts current; exchange, if any.

TRIAL BALANCE.

Each department brought to a balance, if possible, at a single sitting; custody of books; use of distinctive ink for check marks.

BALANCING THE BOOKS.

Not usually a part of auditor's work; when requested, to secure balance, localizing an error; "tabulating" the ledgers; rechecking; completing audit without an exact balance.

STOCK COMPANIES.

Articles of association. Capital stock accounts; relation to amount issued to bona fide applicants, to articles and to minutes; cash book as to amount paid in; capital stock liable to forfeiture; shares ledger; debenture accounts. Dividend and interest accounts. List of stockholders checked with shares issued and dividends payable; verification of figures; vouching payments of dividends when checks are drawn on regular bank account; tracing outstanding dividends; registration of mortgages; examinations of all company books. What the published accounts and accountant's report should show, and form of certificate.

METHODS OF KEEPING ACCOUNTS.

Propriety of accountant suggesting improvements; general system of internal check; general system of accounts; deposits in bank; payments by check; petty cash; verifying cash and bank balance; ledgers; trade ledgers; balancing trade ledgers; cost accounts; knowledge of business carried on; special materials; general materials; expenses of production; indirect expenses; columns in cash book to facilitate balancing the ledgers; separate cash book to each ledger clerk; treatment of invoices; treatment of discount and interest; rents; stock accounts; suspense accounts; bad and doubtful debts; use of journal; wages and salaries; preparation for audit.

(290) In the text books attention is devoted to the subject of the attitude of the bookkeeper and auditor, one to another.

The proprietor of the business frequently taxes the diplomacy of the auditor by an attitude extremely difficult to meet in a satisfactory way. Some proprietors, for example, think it their business to continually interfere with the auditor by inquiring why certain things are being done, and when certain other things are to be done. The attitude of the accountant in cases of this kind should be, as far as possible, one to impress his client with the fact that he thoroughly understands his own business and can only satisfactorily perform his duties when allowed to perform them without interruption.

Another class of client is found where requests are made for the state-

ments of results obtained by the auditor to be framed in a certain manner desirable to the client.

When requests of this nature are made, the best plan is to comply with them as far as possible, so long as the result will not affect the proper presentation of the exact conditions of the case. It is scarcely necessary to observe that the public accountant should always recollect the responsibility of his profession, and absolutely decline to amend his figures in any way which would render them in any way incorrect or misleading.

Among the most notable contributions to the science and practice of auditing recently published are:

"The Auditing of a Mining Companies' Accounts." By Chas. B. Jenkins.

"The Mode of Conducting An Audit." By W. A. Staub, C. P. A.

The latter paper was awarded a prize by the executive committee of the Congress of Accountants held at St. Louis, and practically has the endorsement of the whole accounting profession.

The article on mining accounts is particularly comprehensive and instructive, and these two articles now reproduced for the benefit of subscribers to the "Individual Home Study Course in Higher Accounting" contain in themselves all the elements of a first-class education for those who desire to enter the profession of accounting and auditing.

THE AUDITING OF A MINING COMPANY'S ACCOUNTS

(291) The comprehensive audit of the accounts of a mining company is extremely important in its relations to the legal situation and obligations of the corporation, the personal liability of the directors and the interests of the investing public. A consideration of the subject as affecting the professional duties and fixing the responsibility of a mining engineer engaged in the expert examination of a mine, or in charge of mining operations, is equally important, though this phase of the question is not often presented systematically.

Business customs have pretty clearly established the purposes and principles of an audit. But in the absence of statutes compelling strict periodic investigations of their financial affairs, many companies of excellent repute do not avail themselves of the advantages afforded by such an audit. On the other hand, the failure of many companies to make public the true state of their affairs by means of an adequate financial audit is the frequent cause of loss to investors. The value to both parties of a systematic and thorough examination of company accounts is becoming, however, more and more generally appreciated; and it is to be hoped that this may result in suitable legislation, requiring an annual audit of the accounts and financial affairs of all private corporations, and providing for the license

and registration of competent professional accountants. Such a rule would tend to eliminate that element of fraud and the consequent danger of loss, to which the stockholder is exposed, when he is forced to rely upon official's for information relative to the standing of the company in which he is interested. True, a financial audit offers no protection against the false or erroneous statements of the condition of the mine itself. Nor will it assist stockholders in penetrating the mysterious reticence or paradoxical ambiguity with which boards of directors muzzle and muffle their reports regarding the present condition and future prospects of their mines—a policy of concealment and of mystification which operates, as positively as tangible fraud, to enhance the element of speculation present, in varying degree, in all mining enterprises.

But it is safe to say that in a mining venture, where risk is always expected, capital will more readily seek investment, and stockholders will more cheerfully assume risk and more willingly support any reasonable policy of a board of directors, if good faith and frankness are shown by regular and comprehensive reports and audits.

THE VALUE OF AN AUDIT.

(292) The value of a commercial or general business audit depends upon its purpose, its minuteness of detail, the authority and responsibility of the auditor, and the scope of his instructions. The duties of an English chartered accountant, acting as an auditor, are defined, and, to a certain extent, specified by the "Companies Act" of 1862, which compels an annual audit of all registered joint-stock companies. The United States law has a similar provision, compelling the examination of all national banks by qualified government examiners. But so far as other corporations or private enterprise are concerned, an auditor's duty consists in performing that for which he is employed, and he is responsible to his employer only. If his appointment depends upon the good will of the company's officials, the presumption is that he will act as their agent rather than as the agent of the stockholders; or, if he be engaged to examine accounts and report upon some particular question, it is not likely that he will take it upon himself to extend his examination and report to cover more than that question. For instance, if he is asked to ascertain whether a reported reserve fund is real, or exists upon paper only, and how the said fund is invested, or to say whether, in his opinion, the working capital is sufficient, he would discharge his duty by a partial examination of the accounts and a report upon the one question submitted to him. But when a complete audit of the accounts of a mining company is required for the purpose of presenting to the stockholders a statement exhibiting the financial position of the company, and furnishing data which may possibly assist in deciding upon future opera-

tions, the auditor, if employed as the agent of the stockholders, will exhaustively examine and check all books of account and all the financial affairs of the company.

INSPECTION OF ACCOUNTS BY MINING ENGINEERS.

In examining a mining property for clients who contemplate purchase, the mining engineer often finds it necessary to make an exhaustive search through the accounts and records previously kept by the owners of the mine. This is, perhaps, most frequently the case when it is desired to ascertain the actual cost of mining at a producing mine. If such a mine has been operating sufficiently long to have established a fairly uniform cost, he may be warranted in accepting the figures given by the owners, supplemented by only a cursory inspection of the accounts. But in cases of doubt or suspicion it may be desirable to verify the figures given. While some mining companies, in calculating the cost per ton of the ore extracted, include all expenses of dead-work, development, explorations, etc., many others state as the cost of extraction-work the actual expenditure for stoping and hoisting only, treating the development-work, especially in shaft-sinking, as a "capital" expenditure. Practice in classifying expenditures in this respect, and the arrangement of accounts relative to mine-costs, is so varied that an engineer can satisfy himself only by an examination of the books, if he would know what items are included in the cost. Particularly in considering a "low-grade" proposition, where accurate data is absolutely necessary, it is an immense advantage to be able to determine in detail, by personal investigation, the actual facts.

Of course, the present worth of a mine cannot be determined by the amount of its past dividends; yet, in many instances, the gross earnings, as represented by the tonnage and value of ore already produced, may have a signal importance in considering the future relation of profits to operating expenses.

The value of the product of the various stopes, as shown by the record of ore sales, affords the closest possible check upon the values obtained by sampling the several ore bodies from which ore has been shipped. A determination of the tonnage and value of "ore in sight" is naturally the first consideration of the engineer. But in his judgment of the mine as an investment, the item of costs is a factor of equal importance. From no other source can he obtain such accurate detailed information relative to the costs and charges of mining as from the books and past records of the mine under examination.

THE CONDUCT OF AN AUDIT.

(293) Since the mining business is so radically subject to local conditions, it is to be expected that the forms of records and accounts will be

varied to suit each special case. And, although the principles of accounting are fixed, there exists almost as great a diversity in the systems of accounts in use as in the forms and registers employed. With due appreciation of the difficulties likely to arise from this lack of uniformity, the following general suggestions are offered as to the manner of conducting a practical audit of mining accounts.

In the majority of instances, a mine is owned and operated by a corporation, the main or financial office of which is far from the mine. This makes it practically necessary to consider two sets of accounts; those conducted at the mine, which directly concern the mine management, and those belonging to the province of the secretary, which constitute the permanent financial records of the company. The mine office accounts, in full detail, together with vouchers, are usually forwarded at regular intervals to the main office, where a general audit is made, there being at the mine office but a local audit or checking of the accounts. For the present purpose, however, it may be assumed that all the records are kept and all the accounts conducted in the office at the mine.

LIST OF BOOKS.

In order to plan an intelligent dissection of the accounts, it is necessary to know why they are put together. To this end it will be well, first, to secure from the person in charge an explanation of the system employed, with a list and description of the books used. Indispensable, of course, to the double-entry set of books usually kept at a mine, are the cash-book, journal and general ledger. In addition to these, and to the several subordinate record books, blotters, etc., which convenience demands, a well-regulated system of mine accounts ought to include books of ore shipments and of mining costs. The former should show in detail the lots of ore sold at the mine or shipped, identifying each lot by number, and giving date of shipment, date of payment, weights, terms of settlement, values, and net returns, and also specifying the stope or heading in the mine from which the lot was mined. The costs book, in the nature of an independent or special ledger, is kept to relieve the general ledger of the burden of the many accounts necessary when accurate record is made of the costs chargeable to each separate place of working in the mine. Cost-keeping is one of the most important departments of mine-accounting; and the costs book, when properly conducted, is a regular monthly statement and analysis of costs, itemizing the cost of labor, material and supplies, and distributing the power and operating charges, and the indirect or fixed and general expenses. Moreover, it is also a special ledger, containing an account with each place of working, in which are charged monthly the itemized costs as above, and from which are carried, by journal entry, the totals only of the month's expenses to a "Cost of Mining" account in the general ledger.

The general ledger is considered the principal book, being the source from which is obtained all classified information relative to the financial condition of the business. But it may be well to suggest that, although this book is the receptacle for all transactions, in whatever book the entries may originate the ledger itself is generally ignored by courts of law. The "book of original entry," legally defined as that which the preliminary record or entry of a transaction is first written, is accepted as authority on all questions involved in a transaction or in a series of transactions.

CAPITAL STOCK, TREASURY STOCK, WORKING CAPITAL.

(294) The capital stock comprises the full amount of the capital authorized to be raised by the charter or articles of incorporation. The treasury stock is the stock, over and above the amount subscribed and paid for when the company is organized, which is set aside and held by the treasurer, to be sold for the purpose of securing funds to carry on operations. If the entire capital stock was subscribed and the whole amount paid in was absorbed in the purchase of the mine and the necessary equipment, and further capital is needed to carry on work, the stockholders may, by agreement among themselves, instead of increasing the capital stock, donate pro rata a certain number of shares to be held and sold by the treasurer for working capital. A working capital account is sometimes opened with a credit of a certain amount of the subscribed stock or capital, this sum being set apart for use in prosecuting the development of the mine, etc. These accounts should probably receive first attention. An examination of all entries should be made from their origins in the auxiliary books to their final posting in the general ledger. The principal books auxiliary to the general account books of a corporation are the subscription book, installment book, transfer book and stock ledger. The stock ledger is used solely for carrying accounts with stockholders of their respective holdings in the company. All the other books mentioned are books of original entry, subsidiary to the stock ledger. Examination of these books should establish the fact that the capital stock account in the general ledger is credited with the full amount of the authorized capital, whether paid or not. If it has not been fully paid, an open subscription account will probably be found in the ledger, exhibiting the amount of stock subscribed and paid for. The amount issued and paid in should correspond with the aggregate holdings as shown on the stock ledger. A close scrutiny of the treasury stock account or working capital account, if either exist, should be made, to ascertain the character of the account, and how it was created. If there is treasury stock on hand, carried as an asset, the amount should be noted.

CASH RECEIPTS.

(295) A complete audit involves a careful and systematic checking of each and every individual transaction during the period under audit. The

opening and subsequent entries covering cash receipts for capital stock subscriptions paid, and for treasury stock sold, should be examined and checked. The records of sales of treasury stock should be critically examined, and the entries traced to their final exhibit on the books. If stock is sold at par, "cash" will, of course, show the proper debit entry for the amount received. If disposed of at less than par, or if sold at a premium, the entries covering the balance of difference between the amount received and the nominal or par value of the stock, as well as the cash entry, should be carefully investigated. Strictly speaking, the discount on stock sold at less than par is not a loss, nor is the premium on stock sold above par a gain, of the business proper; and the amount in either case will probably be covered into the working capital rather than the profit and loss account. Frequently, however, especially if a profit has been realized on such sale, the amount is carried directly into profit and loss. Practice varies considerably in the conduct of accounts relating to treasury stock and working capital. But in whatever manner transactions of this nature are recorded an audit will prove its efficiency, if it determines that fictitious values are not given in the accounts representing resources, actual liabilities, expenses, or any other account affecting profit and loss.

Practically, the only revenue of a mine is derived from the sale of its product, in whatever form (crude ore, concentrated matte, bullion, etc.), it may be marketed. All items of cash, as shown on the cash book, should be checked; but this one principal item should be verified by comparing the receipts, as entered, with the ore shipment register, and with the settlement sheets or statements rendered by the smelter or other purchaser. Such a statement is rendered for each shipment separately by all ore purchasers, or, in the case of a company smelting the ores from its own mine to crude bullion or matte, by the refinery to which this product is sold.

CASH DISBURSEMENTS.

All items of cash disbursement should be checked and compared with the vouchers or proofs of payment.

If the "voucher system" is employed, and transactions are recorded by classification in a voucher journal, from which the totals of like debits and credits, instead of individual items, are posted, the work of checking and comparing the itemized expenditures will be confined to this book of first entry. The footings of this journal are then verified, and the posting of aggregate totals is regularly checked.

A critical examination of the vouchers should be made to ascertain whether the payments were properly authorized and certified.

Pay rolls should be examined to see that they are properly and duly signed by employees, and that the totals of each are correctly entered.

The balance of cash shown by the books should agree with the amount

of cash on hand and in bank, less the amount of outstanding checks not yet presented for payment.

After the purely mechanical checking of all entries and postings from the cash book, journal, etc., and the verification of their arithmetical accuracy, the next, and essentially the most important step is to trace each entry from its inception to its final posting, with the view of detecting errors and irregularities, whether of ignorance or of intentional fraud.

This critical examination is of considerable moment, particularly if the audit is made under conditions exacting a close discrimination between expenditures of capital and of revenue.

CAPITAL.

(296) Capital expenditure accounts are debited with all disbursements which result in the acquirement of something of permanent value.

Such entries require very careful inspection, not merely to prove clerical accuracy in recording the transactions, and the vouchers and receipts covering them, but also the legitimacy of their classification as capital expenditures. A systematic investigation of the amounts carried to capital, and of all entries of amounts expended and covered into the accounts of buildings, plants, machinery, equipment, air pipe lines, water mains, etc., etc., should afford an approximate verification of the correctness of these property accounts, and put to proof the fairness of the valuation of the several plants carried as assets.

These accounts should be scrutinized also, to see that they are duly credited with amounts written off, from time to time, for depreciation. Such amounts, taken out of income for deterioration of plant, are usually debited to profit and loss direct, but are sometimes carried by a charge to a depreciation account.

A close discrimination between expenses properly chargeable to capital and to revenue, respectively, is of vital importance; for it is apparent that if too great a portion of the expense of any year be charged against capital, then the correct expense will appear smaller and the profit correspondingly greater. On the other hand, if the entire cost of plant and equipment, or of improvements, which, for all practical purposes, may be considered of permanent value, is charged against the operating expense or cost of mining of any year, a true profit with respect to the ordinary working expenses and receipts may be made to appear as a loss. If the whole, or any portion, of the development work of a mine for any year be charged to capital and the current operating expense be relieved of this cost, the apparent profit will be unduly increased.

In the business of mining, custom has not yet established a uniform method of treating expenditures for renewals and repairs of machinery, plant and equipment. In fact, the question of distinguishing between capi-

tal and revenue for sums expended in the original purchase, enlargements and improvements of plants is a matter of individual concern and choice. Some companies treat every expenditure for machinery and equipment as fairly chargeable to the cost of mining for the year during which the purchase was made. Practically this method may be said to be correct; since the sums so expended are part of the expense of mining, and must eventually be repaid by the revenue derived from the sale of the mine's product. Other companies are too prone to treat as capital not only the original purchase price, but all sums expended for improvements, and for renewals and repairs as well. And some companies do, while others do not, make provision for depreciation. In any event, an examination of the accounts should prove that the aggregate amount appearing in capital accounts as expended for machinery, equipment, etc., is represented by plant of that value, maintained in efficient repair.

As stated, an approximate verification of these amounts can be arrived at by tracing from their source all entries for items so charged. For example, in case a mining plant is purchased and erected under contract, it is easy to determine its original value by reference to the contract. The erection of plants, the installing of machinery, etc., when done by a company by day's labor, involve a careful consideration of the cost of labor, as well as of material and supplies.

It must be confessed that the wages account is the most difficult of all to check effectually, especially in trying to distinguish between capital and revenue expenditures, when mining operations and construction are carried on simultaneously, and more especially when a company has no system of keeping and correctly recording amounts expended for wages. Where such a system exists, and where the records of one department are examined and checked by another and independent department, it will not be troublesome to arrive at a comparatively accurate proving of the correctness of all wages charged to capital.

REVENUE.

(297) In a mining enterprise of any magnitude the debit side of this account represents the expenditure of considerable money. An audit to determine the actual amount, and the correctness of the entries, of expenditure or revenue must be very comprehensive.

The vouchers and receipts, in addition to the checking on the cash book, must be critically inspected, and the classification and distribution of the expense represented by each voucher must be verified.

Mining supplies purchased are charged to revenue when used, not necessarily when paid for. This requires an exhaustive investigation into the nature and conduct of the stores accounts, and a complete checking of these accounts, to make sure that all supplies taken from stores are properly

charged, when credited to the stores account. The entries covering these transactions should be gone into pretty thoroughly. The prices charged for supplies consumed should be compared with the purchase price, and the cost as stated in inventory. An inventory ought to be taken of all material and supplies on hand, the values being compared with the purchase prices, and the total with the aggregate of the various stores accounts on the books.

Wages, salaries, and all fixed and general expenses, such as taxes, insurance, etc., are direct cash disbursements. All these items, with the possible exception of wages, can be effectually tested by comparing with the vouchers, and by reference, when necessary, to the authority for the payment. As, for instance, the correctness of salaries paid could be ascertained from the directors who had the fixing of salaries; taxes, by comparing the payments with the demands of the government, etc.

In the matter of wages, it is impracticable to verify all the items on the pay rolls which go to make up the aggregate expenditure for labor. The distribution and legitimate "expensing" of the cost of labor can be fairly tested as explained; but an auditor may be obliged to rely to a considerable extent upon the system of inter-staff corroboration referred to above, and upon the certificate of an official in authority, as to the veracity of the various pay rolls.

If all accounts representing the operating, fixed and general expense of the business are carried into one account "Costs of Mining," at regular intervals, a comparison of the entries in this account with the mining costs book will facilitate a verification of the aggregate expenditure chargeable to revenue.

PERSONAL ACCOUNTS.

Personal accounts, accounts and bills receivable, and accounts and bills payable, should be examined carefully. In the business of mining, accounts of this nature are not frequent, and liability of loss from bad debts or doubtful accounts is limited. Such accounts, and the contingency of such loss, however, should be considered. The amount of accounts due and bills payable, as shown on the books, should be verified and taken into calculation in determining the gains or losses for the period under audit.

FINANCIAL STATEMENT.

(298) The task of checking and verifying all book transactions being completed, the footings of all accounts in the ledger, whether closed or still operative, should be tested, balances verified, and a trial balance taken. This trial balance proving the correctness of the ledger, it is now in order to prepare a statement of assets and liabilities, and a statement of profit and loss.

The financial condition of the company should be very clearly set forth in this financial statement, the balance sheet exhibiting:

PROPERTY AND ASSETS.

1. Property, showing mines and mineral claims and other real property.
2. Improvements, showing buildings, machinery, plants, equipment, etc., also stores and supplies on hand.
3. Cash and investments, showing amount of cash on hand and in bank, the nature of investments, rates of interest, etc.
4. Debts owing to the company, showing all debts, accounts and bills receivable.

CAPITAL AND LIABILITIES.

1. Capital stock, showing in detail the number of shares; amount paid up; amount, if any, remaining unpaid; amount and nature of calls, particulars of forfeited shares.
2. Debts and liabilities of the company, showing the amount of debts owed by the company, enumerating the same, and distinguishing actual from contingent liabilities, such as claims against the company not acknowledged as debts, or moneys for which the company is contingently liable, should be stated; but only the amount of acknowledged debt is carried out as liability.
3. Reserve fund, showing the amount set aside from profits to meet contingencies.
4. Profit and loss, showing the disposable balance for payment of dividends, etc.

The statement of profit and loss should state specifically upon what accounts losses have been sustained, and detail the accounts through which profits have been realized. In calculating the gains and losses, it must be borne in mind that the loss or gain of a mining venture for any given period is not merely the difference between the receipts for ores sold and the costs of mining. Depreciation must always be taken into consideration.

REDEMPTION OF CAPITAL.

(299) In connection with an audit it is essential that the question of depreciation, dividends, surplus and redemption of capital be taken into account. Most industrial enterprises involve the same elementary principles. But there are considerations in mining which do not affect other kinds of business.

A mine cannot be said to be a permanent source of wealth. Every ton of ore mined and marketed involves a depreciation in the value of the property, which cannot be repaired. Hence, during the life of a mine, not only must interest be realized upon the capital invested, if the venture is to prove successful, but the capital itself must be recovered. In this respect, depreciation

and dividends may be considered as different causes operating to the same end, namely, the diminution of the value of the property.

DEPRECIATION.

(300) Generally speaking, the loss upon assets which are diminishing in value is called depreciation. As applied to plants, equipment, mining machinery, etc. (provided the original cost of these items is not treated as a portion of the current operating expense, and so charged at time of purchase), a certain sum, estimated upon the life of the plant, should be charged against the gross revenue of each year, to replace the capital destroyed or reduced by wear and tear. The method of treating sums expended for plant as current expense is manifestly unfair, both to the management desirous of making a record in the matter of mine costs and to the present stockholders; for, in the early stages of a mine, when most of the equipment is purchased, costs will be exaggerated, and dividends which might otherwise be paid may be deferred, by reason of this abnormal increase in the current expense account. But, since the life of mining machinery is comparatively short, and there is practically no residual value, in case the mine is abandoned as worked out, or the machinery has to be replaced by a plant of greater capacity, it is not only prudent but absolutely necessary that some division be made to redeem its cost.

Depreciation, as applied to the redemption of the capital invested in a mine, provides for the writing off of a certain sum each year estimated upon the life of a mine, to accumulate a sinking fund for this purpose.

In the business of mining, however, much may be said in favor of some method of accumulating a sinking fund, such a fund is seldom, if ever, provided for. The individual stockholder usually thinks that he would prefer to have his capital returned to him as fast as it may be taken from the mine, rather than await the accumulation of a fund sufficient to redeem the whole capital. To this end the custom prevails, and will probably be considered the better method, so far as mining is concerned, of repaying capital by dividends. By means of dividends, or, as they might properly be called, enlarged dividends, the stockholder, after calculating a fair interest on his investment, can consider the sums received over and above his interest as repayments of the principal of his investment.

This method may be subject to some question, since there are few (except those who have given special thought to the matter) who properly appreciate the difference between a dividend which is purely a distribution of profits and a dividend which is intended to repay capital. Then there is this contingency to face: In the case of a successful mining enterprise it may transpire that the full amount of the company's capital is carried as a liability, when, in fact, it has all been repaid in the shape of dividends; while,

on the other side of the balance sheet, the mine, valued at its original cost and worth, is still shown.

The amount paid in dividends in this way each year may be estimated, or rather will depend upon the amount of output and the profit realized upon the sale of product.

DIVIDENDS.

(301) The term dividend, as generally accepted, means a sum which a corporation sets aside from its profits to be divided among its members. It is a fundamental rule that dividends shall not be declared or paid when a company is insolvent, or the payment of which renders a company insolvent. A dividend must be declared from realized, and not from estimated, profits. The violation of this rule is not common. But it too frequently happens that when profit does not follow on the heels of promise the directors of a company anxious to appease the importunity of stockholders are led to ignore one of the most important precepts of financial prudence. Under this constraint they declare and pay dividends without first having provided a surplus or reserve fund; that is, a special fund or profits set aside for the purpose of meeting contingencies, or of equalizing dividends.

RESERVE FUND.

(302) If such a fund, set apart from current income, or created by withholding a small percentage of the annual net earnings, is shown upon the books, this account should be examined by the auditor, and its accuracy should be tested. The amount should be held, either in actual cash on hand or on special deposit in bank, or invested in safe and readily convertible securities. A reserve fund once established should be drawn upon only in case of urgent necessity, or to meet exceptional and temporary reverses in profits.

The history of the mining industry is replete with records of companies wrecked by adverse circumstances, by reason of the lack of means with which to carry exploration to a probable successful issue—means which might have been provided at a time when the mine was earning regular profits. But with working capital exhausted, stockholders reluctant to pay assessments or to render themselves personally liable for borrowed capital, the ore reserves of the mine worked up to their limit, and no reserve fund to meet the exigency, the mine is abandoned. And thus is recorded another mining failure which a little forethought and business prudence might have averted.

Again, it may occur that a mine in the full flush of prosperity is compelled to discontinue dividends for a period. There would be fewer disappointed stockholders, in this respect, if the policy of providing a surplus were rigidly insisted upon, regular dividends could be continued, and a most

distressing period in the affairs of a mining company could be safely tided over if, during its most profitable period, provision had been made for such a crisis.

THE GENERAL PROCEDURE IN MAKING AN AUDIT.

THE OBJECT OF AN AUDIT.

(303) Periodical examinations of the accounts of commercial and financial institutions, special examinations for prospective investors, investigations on behalf of creditors and trustees in bankruptcy, examinations to ascertain the cause of decreasing profits, exhaustive audits preparatory to installing improved systems of financial Cost Accounts and investigations of the accounts of public officials at the behest of dissatisfied citizens, are but a few of the many purposes which clients have in mind when desiring to have accounts of an undertaking audited.

The object of the auditor should be, in the main, threefold: (1) Detection of fraud. (2) Discovery of errors of principle. (3) Verification of the mechanical accuracy of accounts. As has been pointed out by other writers, the attempted concealment of fraud must be accomplished by commission of either an error of principle or one in the mechanical work of the accounts; owing, however, to its importance, and often its predominating importance, the detection of frauds is conceded a separate place among the objects of an audit. From first to last it is the auditor's duty to be on the lookout for fraud. Nine times out of ten the client who determines upon an audit suspects no one in his employ in the slightest of dishonesty, and yet experience teaches that in nine cases out of ten it is where they are least expected that fraud and dishonesty are discovered. This should not be taken to mean that all the employees in a client's office are to be suspected of being rogues masquerading as honest men—on the contrary, every man is held to be innocent until proven to be otherwise—but it does mean that the auditor must be vigilant and not forget that occasionally, or we may even say frequently, "appearances are deceitful." Errors of principle are as often found to be errors of omission as of commission, and it is here that an initial audit most often bears its fruit. As regards verifying the mechanical accuracy of accounts, it is, of course, preposterous to suppose that an auditor in the limited time at his disposal could be expected to verify every footing, every posting, and all the other routine details of a set of accounts. The verification incident to and necessitated by the attainment of the first two objects is usually sufficient to reasonably satisfy him of the correctness of the accounts from this standpoint.

THE CONDUCT OF AN AUDIT.

(305) When an audit is being made for the first time it will be of great advantage to the auditor to go thoroughly over the system in force,

the methods employed to gather the information necessary to the proper administration of the accounting department, the manner in which it is treated after obtained, whether intelligently or otherwise; the safeguards, if any, against error, intentional or unintentional; further, whether in the case of manufacturing and mercantile enterprises any system of Stock Accounts is kept, and in the case of the former a cost system, and whether they fit into the scheme of the general accounts or are in any other way of assistance. It is also desirable that he familiarize himself, at least in a general way, with the business of his client, ascertaining in the case of a commercial undertaking for instance, the articles manufactured or handled, the average rate of profit which is expected to be earned, and the numerous other matters that will suggest themselves.

Succeeding this preliminary survey, the mode of procedure should be mapped out, and this in considerable detail. It will, of course, not be possible to determine in advance all the work that should be done, as the results and observations made during the progress of the audit will call attention to much of the detail which it may be desirable to go into, but there is no question that a well laid out plan will greatly facilitate and simplify the work in hand.

VERIFICATION OF THE BALANCE SHEET.

(306) Ordinarily, the work of the audit will naturally run in two channels—viz., the verification of a Balance Sheet on a date specified and the examination of the Profit and Loss or equivalent account for a period or a number of periods ending with the date of the Balance Sheet.

A Balance Sheet is a statement of assets and liabilities as of a given date, hence an audit of it will embrace (a) the verification of the existence of the assets, also ascertaining whether any have been omitted, and, as far as it lies within the province of the auditor, their values, or at least of the bona fides of those whose statements of value are open to question and the methods of arriving at the same; (b) the verification of the existence and amounts of the liabilities and ascertaining most particularly that there have been no omissions, either of contingent, accrued, or direct liabilities.

ASSETS.

(307) Of the assets the cash naturally suggests itself as the item which should be verified at the earliest possible moment. Bank balances should be proved by reconciliation of the balance per Cheque Book with the Bank Pass Book, which should be settled at the time of the audit, or, if there is any doubt as to the authenticity of the Pass Book, by procuring a certificate from the bank. Cash and cheques on hand should be counted, the latter being carefully scrutinized as to date and also as to entry in Cash Book; if this precaution be omitted it is possible to conceal a shortage by submitting as part of the cash balance cheques which have not as yet been entered.

Memoranda, I. O. U.'s, etc., should be noted, attention being given to the question of the authority of the cashier to make advances or other payments on memoranda. Where cash is on hand in several different departments, as, for instance, in a bank, it is important that, as far as practicable, the counting of the cash proceed simultaneously in all the departments, otherwise cash already counted in one department might very easily be transferred to another department, unknown, of course, to the auditor, included as part of the balance in the latter, and thus a shortage be concealed.

Accounts receivable are, in many instances, quite trying to the auditor and call for special attention both as to their genuineness and value. Where it is practicable for the auditor to send out to the debtors, or examine before they are sent out, statements of their accounts, this is the most satisfactory way of verifying them, and especially so if provision is made for acknowledgment (addressed to or marked for the auditor) of their correctness, although there is almost a certainty of some recipients not making any acknowledgment. In some cases, such as that of stock brokers, this method is absolutely essential, as in no other way can the auditor satisfy himself that the accounts are correct as stated on the books, particularly in the item of collaterals which are carried on the accounts. In a mercantile business the balances should be earmarked as consisting of certain unpaid bills, the most recent in due date. "Slow pay" and overdue accounts and those on which payments are made in round sums with very infrequent settlements should be closely scrutinized, as it is possible that the operation of "washing" is being carried on—that is to say, payments are being received when due, but the earlier collections having been misappropriated such cash credits as appear on the books are made from subsequent collections, or in rare instances, where the use of misappropriated funds is allowed by success, by restitution. Bad and doubtful accounts should be investigated before being charged off to make sure that they have not been collected and the moneys misapplied. The old practice of charging off bad accounts to profit and loss without keeping any further record of them is a poor one, and is being gradually abandoned. Where bad accounts are charged direct to Profit and Loss instead of to a Suspense Account, they should be entered in a memorandum book, together with all particulars relating to them, so that they can readily be followed up and any possible future value be realized.

As has already been noted, accounts receivable should be examined for their value as well as genuineness, and a suitable reserve provided for such as are bad or doubtful. It is best to err on the safe side and make the reserve too large, rather than the reverse. In "lean" years clients are very apt to omit making any reserve for doubtful debts, contending that they will be collected "some time," and the auditor cannot urge too strongly the necessity of making proper provision for them.

Where accounts consist mainly of instalments payable on sales made on the lease agreement plan—the article sold to become the property of the lessee upon payment of the final instalment—a tabulated record of these sales showing total amount of each sale, terms of payment, etc., is much more convenient, and lends itself more easily to an intelligent examination than the ordinary form of Ledger. To confirm the existence and amount of the accounts the agreements themselves, which are signed by the customer, may be examined and compared with the record. The question of doubtful debts is especially important here, as, with few exceptions, there is sure to be loss on some of the accounts.

Bills discounted, and time and call loans, which form the largest item of a bank's assets, should be scheduled, together with the collateral pledged with them, both the notes and collateral themselves being examined or verified by letter as to such items which may be in the hands of correspondent, for collection or other cause. The bills discounted should be separated into one-name and two-name paper, and the customer for whom discounted indicated. The value of collateral on loans should be shown as far as practicable; where it consists of securities listed on a Stock Exchange, this is comparatively simple; but in the case of securities which are not listed, such as those of "close corporations," or warehoused goods other than those dealt in on "Change," it is not so simple a matter, and, in some instances, not practicable for the auditor to attach and value.

VERIFICATION OF INVENTORIES.

(308) The subject of inventories of materials and manufactured products is one of great importance in those businesses of which they form a part. Their verification seems to be somewhat akin to that of pay-rolls, in so far that the most efficient check is to have a number of different people concerned in and held responsible for their make-up. Generally speaking, it is not possible for the auditor to verify the quantities of materials on hand, and he is, to this extent at least, at the mercy of those preparing the inventory. In some very unusual instances the auditor is requested to have one of his assistants present to verify the counting and weighing of the stock on hand, but even in such a case he cannot vouch for the quality of the materials or products. Where the force of clerks is large enough to permit it, the work of taking count of the quantities, pricing, and making the extensions and footings, should be assigned to separate employees, who should be required to certify separately in writing to the work performed by each of them. The footings should be checked by the auditor's staff, and the extensions at least roughly.

The inventories should be analyzed and compared with those of previous periods, both as to prices and total values, and any marked changes inquired into. Prices of raw materials can be verified by comparison with

purchase invoices; where Cost Accounts are kept, the prices of finished goods can be readily verified; if no Cost Accounts are kept, it may be somewhat more difficult, but, at all events, it should be seen to that there is a margin between the inventory and selling prices of finished goods. The items forming the basis of valuing manufacturing products should be scrutinized to see that no expenses which have not been actually incurred are included. For instance, in the case of a publishing house, it is usually the rule to pay royalties to authors only on the books actually sold; to include the royalty as part of the cost of unsold books would not be correct unless the royalty had been credited on Book Account.

Under the heading of "Plant," which may be expanded to include rights of way and tracks of railway companies, together with locomotives, cars, and other equipment, we have a subject which from its very size attracts much attention. It is the concensus of opinion among accountants that an auditor cannot be expected to act in the capacity of an appraiser, and determine the actual value of the plant of the concern he is auditing. He should, however, examine very carefully all entries in the books relating to this account; the minutes should be consulted regarding all issues of capital stock which may be charged to it for purchase of plant or equipment; charges for extensions and additional machinery, etc., during the period under review, should be looked into to make sure that no replacements are being charged to this account because they may happen to run into large amounts; sales of worn-out plant items, such as old boilers, must be verified as having gone to credit of Plant Account and not to some operating account, unless the original cost, or depreciated cost (if depreciation has been provided for), be charged off at the same time. Extensions are, at times, quite difficult of verification when the concern does its own construction work, as is largely the case with railway companies, and the materials and labor charges are of exactly the same nature as those for repairs and renewals. In such cases the character of the extension and the value should be certified to by the engineer or other competent authority.

DEPRECIATION.

(309) Depreciation must be considered in relation to statement of property value. The number of instances in which depreciation is properly provided forms an exceedingly small percentage of the grand total of business enterprises. The auditor cannot, of course, compel his client to provide for depreciation, but he should certainly call attention to its great importance, both as to its effect in properly stating the Balance Sheet and the earnings, and if no provision is made attention should specifically be called to the fact in the report submitted. The amount or rate of depreciation to be allowed in various undertakings cannot, of course, be gone into in the limited space available nor under such a general heading as that of the sub-

ject under discussion. That must be left to the writer who has more space and time at his disposal.

OUTSIDE INVESTMENTS.

(310) Investments in mortgages, stocks, bonds, etc., should be verified by examination of the securities, or by correspondence if pledged as collateral on loans. Their cost can be verified by the vouchers for the expenditures made for their purchase. It is well to note the number of registered securities, so that at the time of the succeeding audit, if no change appears in the book accounts of the same, the auditor may satisfy himself that there has been no unauthorized use of the same in the interval. It would be found convenient, when the investments are not liable to be disposed of for some time, to place them in envelopes sealed with the auditor's private seal and their contents marked on the envelopes by him. The unbroken packages do not then have to be examined during every audit.

ADJUSTMENTS.

(311) Prepaid and accrued expenses, such as insurance, taxes, wages, etc., which may rank either as assets or liabilities, are usually not very difficult of verification. The unexpired insurance may be readily proven by scheduling the policies in force with the total premium paid on same and calculating the value that the unexpired portion of the term bears to the whole. When the fiscal year of a business subject to taxation is not coincident with the calendar year, or the period under review is not an even year, prepaid or accrued taxes form an item in the Balance Sheet; if prepaid, their verification is a matter of simple arithmetic; if accrued and the amount of the assessment and the tax levy be known, it is likewise quite simple—if the current year's taxes are not yet known the preceding year's will have to be taken as a basis of calculation, due allowance being made for any expected crease of assessment or levy. Accrued wages may be roughly checked by comparing the proportion of the next succeeding pay-roll which the accrued period bears to the whole pay-roll period, and so on ad libitum.

LIABILITIES.

(312) The audit of the liabilities is not of less importance than the audit of the assets. This aspect of the examination demands that great care be taken, as liabilities are more often omitted from the Balance Sheet than assets. The usual item of liabilities are accounts and bills payable, bonds, mortgages, revenue collected in advance of being earned, such as discount on unmatured notes held by banks, subscriptions paid in advance, etc., and accrued expenses. The proving of accrued expenses has already been spoken of in the preceding paragraph and need not be dealt with again, except to say that the auditor should be certain that all accrued accounts of whatsoever nature have been included; the verification of revenues collected, but

as yet unearned, is in general not very complicated, and is generally more a matter of arithmetic than anything else.

As regards accounts payable, the most frequent error in practice is one of omission, and consists of bills for goods actually received and included in the inventory of stock on hand not being entered in the books during the same fiscal period. Where a good system of stock accounts is in use, or a method of checking back a record of goods received with the Purchase Book or the invoices themselves, this is not so liable to occur, but in a concern where neither of these things obtain, especial vigilance is needed on the part of the auditor to satisfy himself that no bills have been omitted. A good way of verifying the accounts payable is to check back the vendors' statements with the Ledger, any bills appearing on the statements but not entered on the books being carefully scrutinized as to their dates and the dates of the receipt of the goods, which latter should be subsequent to the date of the taking of the inventory, otherwise the bills should have been entered.

Unpaid notes per the Bills Payable Book should be totaled and the aggregate compared with the Ledger Account. In the case of collaterals being pledged on the loans, the holders should be communicated with for confirmation of the loans and the collateral. This is especially important in the case of stock brokers and similar houses where the balancing of the stocks is an important feature of the audit.

In the matter of bonds or mortgages the minutes of the concern, if it be a corporation, should be consulted for authority bearing upon their issue, rate of interest, etc. The bond and mortgage should be read through to see what provisions regarding sinking funds, redemption, etc., may be contained therein, and, further, the auditor should see that these provisions are carried out. It might also be well to examine the county records for any other incumbrances on real estate appearing among the assets, although how far an auditor's duty extends in this direction is still an open question.

Contingent liabilities, such as endorsements on bills receivable discounted, should not be overlooked. They sometimes become direct and very live liabilities in short order.

CAPITAL STOCK.

(313) Examination of the books and records pertaining to the issuance of capital stock should, at least, extend to the checking of the Stock Ledger Trial Balance and inspection of the stock certificate stubs and preferably also the transfer records. This latter is, however, sometimes of such volume that it is necessary to have it made the subject of a special examination. As with the issuance of bonds, the minutes should be examined for any action relating to issuance, retirement, or exchange of capital stock.

The articles of co-partnership in private firms should be examined for

the provisions relating to the investments to be made by the several partners, interest on capital, and on withdrawals, division of profits, etc.

PROFIT AND LOSS ACCOUNT.

(314) The audit of the accounts constituting the Profit and Loss Account is partially covered by the work incident to auditing the items of the Balance Sheet. It is in this part of an audit that the greatest amount of detail is usually encountered. While this cannot always be said of financial institutions, the verification of those accounts constituting the Balance Sheet often requires a more extended examination of detail than the Profit and Loss section, yet of manufacturing, mercantile, and enterprises of like character, this is undoubtedly true.

VOUCHERS.

(315) Limited space only permits of some very general remarks in this connection. The entries in the Cash Book should be vouched; when the payments are all charged to Personal Accounts, or for such of them as are when this is only partially the case, paid cheques, may be accepted as sufficient vouchers, the invoices for purchases, &c., being examined and used to vouch the credits to the Personal Accounts. These latter usually come through a Purchase Book or voucher register, or, where the system is antiquated, are found in the Journal. Cheques which are drawn to "Bearer," "Cash," or to order of a bank, in such form that the funds could be obtained by the bearer either in cash, due bill, &c., should, of course, not be accepted as final vouchers. A cheque to the order of pay-roll is of no value as a voucher for wages payments, except in so far as it might imply that the drawer held himself responsible for the correctness of it; such a conclusion would, however, be rather far-fetched, as the person signing a cheque is not unusually one upon whom the examination of the pay-roll would devolve.

In the case of very large concerns it is not practicable for the auditor to examine all the vouchers. The best plan is to have all payments charged to Personal Accounts, or a controlling account, such as "Vouchers Payable," and have all vouchers entered in a Voucher Register to the credit of Personal Accounts or the controlling account, the Cash Book and the Voucher Register to be kept by separate persons. By this method the voucher for each payment, except such few as it may be desired to charge direct in the Cash Book, and which can be readily examined by the auditor, is submitted to the scrutiny of a second party, who has no connection with the Cash or Bank Account, and who, except in the event of collusion with the cashier, would have no interest in putting through any fictitious vouchers.

(316) In connection with the subject of vouching payments, that of pay-rolls may be spoken of. It is generally conceded that, as regards pay-rolls, the only safety is in numbers, and this, of course, with a good system to make the best use of the numbers. An auditor may verify the footings and in some cases be able to check back the pay-roll to the original time reports from which it is made up, but to accept any responsibility further than this is foolish in the extreme. Even in the instances where it might be possible to verify the pay-roll by other documents, the time required to do it would usually entail much greater expense than clients would care to pay.

The party making up the time should not be the same one who affixes the rate and makes the extensions, nor should either of these, where it is possible to avoid it, be concerned in the filling of the envelopes or the actual paying off. In some parts of the country, such as in the South, where thriftless negro labor is employed, the question of unclaimed wages becomes quite important. A good plan to take care of these is for them to be turned over to the treasurer, or some other authorized person, immediately upon completion of the paying off, to be entered by him in a book ruled to permit of the workman signing for his envelope when calling for it subsequently. After a sufficient lapse of time those still uncalled for should be returned to the general cash, being credited to an "Unclaimed Wages" Account. From the book before mentioned, the auditor can easily see that no unclaimed wages are lost to the company or proprietor.

INCOME.

(317) In practice the satisfactory auditing of the income will be found more difficult than that of the expenses. Here, too, a good system is the best assurance of the integrity of the accounts. The recording of the sales should not be committed to the charge of the same person who handles the cash collected. This will go far to insure the correctness of the sales record and obviate any intentional omissions. Where possible the auditor should verify the sales independently for at least a portion of the period under review. The circumstances of each particular situation must, of course, govern. If a Stock Account of the production is kept or can be constructed, as, for instance, at coal or ore mines, the sales can usually be verified, as to quantities at least, quite satisfactorily. In this connection the matter of "internal check," which is dwelt upon at length in most works on auditing, may be mentioned. Briefly stated, it consists largely in so disposing the office staff that there will in reality be an internal audit continually going on. In some cases this is arranged by changing the duties of the various clerks from time to time: *e. g.*, in a bank where there is more than one individual bookkeeper it is well to change the bookkeepers from one to

another; where there is only one it is not always practicable to vary his duties, but the Trial Balances can occasionally be taken off by someone else, and the customers' Pass Books balanced by someone other than the book-keeper.

In other instances this is accomplished by having the work so divided that the work of one person is incomplete in itself, and must dovetail into that of another before being complete, the theory being that only by collusion between two or more parties would it be possible to conceal dishonesty. In still other instances the duties of one of the office force are those of an auditor, he verifying much of the detail which it would not be practicable for the professional auditor to go into. In point, is the auditing of the income of railroad companies, who need to have auditors constantly checking the income from freight and passenger traffic. The safeguards to be placed about pay-rolls and sales, which come under this head, have already been touched upon.

Income from securities presents no especial difficulty, as that collectible on bonds and mortgages can be determined from the securities themselves, while the dividends declared on stocks can usually be quite easily ascertained.

Miscellaneous income must be dealt with as the occasion demands; there are hardly any two businesses in which they can be verified in exactly the same way.

Regarding the footings, postings, &c., to be verified, this will, of course, vary with circumstances. As a general rule, the footings of all the books of original entry and of the nominal Ledger Accounts should be verified. All postings to the impersonal accounts and, at least, the credit postings (particularly the cash) to all other accounts should be checked. It goes without saying that the Trial Balance and its footings, as well of subsidiary Ledgers as of the general Ledger, should be verified.

EXERCISES.

1. What would be the nature of your audit (apart from details) of a picture-publishing company's Balance Sheet comprising the following items:

LIABILITIES.	
Capital Stock	\$30,000 00
Sundry Creditors and Reserves.....	5,000 00
Advance by the Bank on security of Lease.....	3,000 00
Profit and Loss.....	\$2,600 00
Less Interim Dividend paid.....	600 00
	<hr/> 2,000 00
	<hr/> \$40,000 00
	<hr/>

ASSETS.

Building	\$ 7,000 00
Fixtures and Fittings	2,000 00
Stocks of Plates	12,000 00
Stocks of Engravings	6,000 00
Cost of Copyrights	8,000 00
Sundry Debtors	3,000 00
Cash Balance	2,000 00
	<hr/>
	\$40,000 00

2. The New York Steamship Company issued income bonds for \$500,000, the deed of trust providing that an amount equal to 5% of the total issue be set aside out of the earnings of the company each year for the retirement of the bonds.

December 31, 1900, the assets of the company amounted to \$1,200,000, the capital stock to \$500,000, other liabilities \$100,000, profits for the year \$70,000.

The company received \$30,000 from the government for transportation of troops during time of war, which amount did not appear on the books as an asset, the cost of transporting the troops having been charged to profit and loss account in prior years.

Explain by journal entries (a) how the redemption fund for the retirement of the income debentures should be treated, (b) how the income of \$30,000 for transportation should be treated in order to show its availability for distribution among the bondholders, without interfering with a correct showing of the earnings of the company.

3. It is provided in a company's prospectus that an annual sum shall be set aside out of profits to pay off bonds when due. How should the fund thus created be treated? What should be the nature of such a fund when all the bonds were paid off? Of what should it consist?

4. If you had reason to suspect that certain defalcations might be detected in the examinations of a Cash Book, what means would you adopt in order to verify it in all respects?

5. What check would you have upon fictitious entries showing purchases, also returns of goods sold?

6. Under what circumstances do you consider "Goodwill" or "Patent Rights" legitimate Assets? As an Auditor, how would you advise such assets being dealt with year by year?

7. In auditing the books of a manufacturing establishment, what voucher would you require for wages paid, and how would you satisfy yourself that the wages list did not contain the names of fictitious employes?

8. Should the following items be capitalized or charged to revenue for the year?

- (a) Premium given for a lease.
- (b) Costs attending a mortgage.
- (c) Commission on an issue of Debenture Stock.
- (d) Accrued interest or dividend included in the cost price of the investment.
- (f) Preliminary expenses on the formation of a company.
- (g) Minimum royalties paid but unearned, recuperable out of future workings.
- (h) Cost of removing a 6-inch gas pipe to another locality and replacing it with a 9-inch pipe.

Give your reasons fully in each case.

9. What general principle should an auditor apply in distributing expenditures regarding which his client is uncertain as to whether they should be charged to capital or to revenue account?

10. In your opinion, is there any satisfactory method of auditing accounts not kept by double entry? If so, illustrate the same.

11. What, in your judgment, is the value of a Bank Pass Book for audit purposes? To what extent would you take it as a voucher for Cash Book entries, or for the balance carried forward?

12. What means should the auditor adopt to ascertain that all remittances made by regular customers and receipts from cash sales have been properly entered on the cash book?

13. The detail of an audit included the examination of vouchers of all descriptions. What would you deem proper vouchers for the following: Purchases, Sales, Journal entries, Cash receipts, Cash payments, Petty expenditure?

14. The system of payment by results is largely adopted. Thus, the salary of a manager may be (1) a fixed sum per annum, and (2) a proportion of the profits. The directors' remuneration may be on a similar basis. In both cases the profits are to be those certified by the auditor after charging all expenses. How would you treat these cases in the Accounts and Balance Sheet?

15. A corporation expends large sums upon advertisements in order to form a business. Assuming that the expenditure thereon decreases annually until in the seventh year, it reaches a point representing a normal annual cost under this head, how would you expect the amounts to be treated in each year's Balance Sheet? In your reply let \$10,000 be the expenditure of the first year, and decrease \$10,000 annually.

16. When auditing the books of a firm engaged in mercantile business, on what principle should the auditor proceed in determining whether an account receivable should be classed as good, bad or doubtful?

16. Unless the outstanding debts are extremely numerous, it is desir-

able that the Auditor should go over the list in company with his client, or managing director, and settle the amount of loss to be provided for. The rules useful to an auditor in determining whether accounts are good, doubtful, or bad, are as follows:

1. In mercantile concerns, debtors who always take a cash discount may, in the absence of information to the contrary, always be assumed to be good for any outstanding balance, not greatly in excess of their ordinary amount.

2. Debtors who always accept bills for their accounts, may, under similar circumstances, be regarded as good, provided the bills are always met at maturity without renewal. Where there are renewals the accounts should be examined more carefully, and as the number of cases would not be large, this detailed inquiry would not be impracticable.

3. Accounts showing an increasing debit balance require more careful scrutiny than those where the balance is reduced, more particularly if the number of transactions during the period be small.

4. In the case of interest-bearing debts, the punctual payment of the interest may be taken as presumptive evidence that the principal is good, provided it be not in arrear, but where the principal is in arrear, the presumption is that the debt is at least doubtful, unless sufficient security is held to cover the amount.

5. "Dead" accounts are more like to be doubtful or bad than "live" accounts. In this connection, a debtor who during the current year has not paid enough cash to extinguish the balance against him at the commencement of the year, may generally be regarded as a "dead" account, and treated accordingly.

6. Apart from the open balances standing against the various debtors in the customers' ledger, it is important not to lose sight of unmatured acceptances, whether these be in hand, or have been discounted, but, as has already been stated, a customer who invariably meets his bills at maturity, may usually be regarded as safe to continue to do so.

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CARD AND LOOSE LEAF LEDGER SUPPLEMENT.

Those careful souls, who are so anxious lest we injure ourselves by adopting the new and improved and forsaking the old, have excelled themselves in pointing out the dreadful consequences of adopting card and loose leaf ledgers.

The manufacturers of patent bound books and the public accountants (who can see no good in anything unless it emanates from themselves) have done their best to prejudice business men against one of the greatest conveniences of modern accounting, the merits of which are so apparent and abundant that they will certainly come into universal use as soon as their advantages are generally understood.

It is not our intention, however, to expatiate on the many reasons why card and loose leaf systems should be installed, but to indicate what the attitude of the auditor should be where they have been installed, and what safeguards it is advisable to throw around them, so as to attain as far as possible the prevention of fraud in handling them. No precautions should be omitted which will discourage those whose nature tempts them to take advantage of every loophole to embezzle, and these precautions may be conveniently sectionalized under the headings of "Mechanical" and "Accounting."

MECHANICAL.

With mechanical safeguards the auditor in the regular course of his profession has no connection, but in his advisory capacity he should use his influence and authority to see that they are provided, if only to facilitate his own work and to avoid the possibility of future unpleasantness.

Taking up card ledgers first—a locking device should be provided so as to prevent the removal of cards from the tray or file when not in use. There is very little danger of loss, while in regular use by the book-keeper. The danger arises in the promiscuous removal of cards for reference by other persons, such as the Secretary, Credit Man, Cashier, etc. The Credit Man is generally the worst offender in this direction and should have some kind of duplicate record provided for him in large businesses. (We are referring more particularly to accounts receivable card ledgers.)

Ledger cards should be consecutively numbered when printed and, if possible, with distinctive figures which cannot be so easily reproduced.

A small record book should be provided with printed numbers down the margins of the pages after the style of a check register, the hundreds, or thousands, being filled in with ink at the top of each page, as required, and governing the numbers printed on each page. Thus the left hand page will have printed numbers from naught to forty-nine. If the numbers are intended to represent cards numbered from 5000 to 5049, the figures 500

will be written in front of the cipher at the top of the page, indicating that all the numbers on that page belong to the series 5000 to 5049. (See illustrations.)

CARD RECORD				
Nos	Date Issued	Transfer Binder	Accounts Closed	Canceled Spoiled
5000	9/3/06			
1				✓
2				
3		✓		
4			✓	
5				
6		✓		
to				
42				

CARD RECORD				
Nos	Date Issued	Transfer Binder	Accounts Closed	Canceled Spoiled
5050				
to				
5099				

The ledger cards as received from the manufacturers and the card record book should be in the custody of a responsible business official, whose duty it would be to issue the cards to the book-keeper as required, making a note of the numbers and date issued in the record book.

As the cards are removed from the current file, when filled, or account closed, or spoiled, or cancelled, the disposition should be noted on the record, which will thus contain the history of each card.

This record book will be handed to the auditor with the other accounting records at the time of audit, and the auditor will thus be in a position to ascertain that each card issued to the book-keeper is accounted for, this verification being performed at the same time as the verification of the ledger balances.

A further precaution of value may be adopted by providing a special distinctive stamp to be impressed on each card in the "heading" space, the die to be retained in the custody of the official who issues the cards to the

[illegible]

book-keeper and the impressions on the cards to be made by said official at date of issue, as per illustration.

Further, the cards may be made with a colored surface, which will reveal erasures by showing the white card underneath. In the United States, however, there does not appear to be much prejudice against erasures, as one of the most advertised qualities of linen ledger paper is that it will stand two or three erasures without injuring the writing surface of the paper.

LOOSE LEAVES.

Similar precautions may be adopted in relation to loose leaf ledgers.

In many banks a seal is used as per illustration. This is initialed and



placed on the lock, when it is impossible to remove the ledger sheets without breaking the seal by passing the key through it.

ACCOUNTING.

The principal accounting safe-guard against the fraudulent manipulation of both card and loose leaf ledgers is found in the provision of controlling or representative ledger accounts frequently described in the columns of *The Business Man's Magazine*. (See illustration.)

The amounts posted to these controlling accounts are the totals obtained from the records of original entry from which individual postings are made to the personal accounts in the accounts receivable or accounts payable ledgers. The total debits posted to the Controlling account should agree with the total of the individual postings to the ledger controlled or

represented, and in like manner the amount credited to the Controlling account should agree with the total of the individual amounts posted to the ledger controlled, and the balance of the Controlling account should agree with the recapitulation of balances appearing in the ledger controlled.

SALES LEDGER CONTROLLING ACCOUNT.						
Date	Folio	Debits	Date	Folio	Credits	Dr Bal
Jan 31	S 18	\$9,876.50	Jan 31	C 97	\$5954.62	
				J 74	897.40	\$3024.48
Feb 28	S 95	10,742.89	Feb 28	C 100	7501.25	
				J. 97	552.40	<u>15713.72</u>

As, therefore, these controlling accounts are derived from the records of original entry it follows that a comparison of card ledger debits, credits and balances with the total debits, credits and balances shown by the controlling accounts will immediately reveal any ordinary manipulation of the cards in the way of posting of credits to ledger accounts arbitrarily, where no such credits are entered in cash book or journal—the abstraction of a card without substitution—the fraudulent increase of debit or credit postings—the making of intentional errors in balances, etc., etc.

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